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No. 80-1464

In the Supreme Court of the United States

OCTOBER TERM, 1980

JAMES G. WATT, SECRETARY OF THE INTERIOR, ET AL.,
Petitioners

v.

ENERGY ACTION EDUCATIONAL FOUNDATION

ON WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA

JOINT APPENDIX

PETITION FOR CERTIORARI FILED FEBRUARY 27, 1981.
CERTIORARI GRANTED APRIL 6, 1981.

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RELEVANT DOCKET ENTRIES

DATE	FILINGS—PROCEEDINGS
(T) 09-18-80	Copies of notice of appeal and District Court docket entries (n-3)
(T) 09-18-80	Docket fee was paid in the District Court on 9/18/80
(T) 09-19-80	4-Appellants' motion for scheduling of expedited oral argument (p-19)
(T) 09-23-80	Certified Original Record (3 volumes); 4 volumes of transcript (under separate cover); 1 deposition; and 3 brown expandable folders of exhibits (n-3)
(T) 09-23-80	Certified Original Supplemental Record (no transcript) (n-3)
(T) 09-23-80	Per Curiam order granting appellants' motion for scheduling of expedited oral argument and this case will be heard at oral argument on Friday, September 26, 1980 at 2:00 pm; the parties are directed to file simultaneous briefs on the merits no later than 1:00 pm on Thursday, September 25, 1980; CJ Wright; Wald and Mikva (who did not participate), CJs
(T) 09-25-80	15-Appellants' brief (p-25)
(T) 09-25-80	7-Affidavit of James A. Joseph (p-25)
(T) 09-25-80	4-Appellants' motion to dispense with printing of record (p-24)
(T) 09-25-80	4-Appellees' motion for permission to file brief without index (p-25)
(T) 09-25-80	Clerk's order granting appellees' motion for permission to file brief without index
(T) 09-25-80	15-Appellees' brief (p-25)
(T) 09-25-80	4-Motion of Atlantic Richfield Company, et al. for leave to file brief and to participate in oral argument as amicus curiae (p-25)

DATE	FILINGS—PROCEEDINGS

(B) 09-26-80 Argued before Robinson, CJ and USDC Judge Harold Greene. At the outset the Court announced that Circuit Judge Wald is a member of this panel but is unable to be present. She will participate in the decision of this case on the briefs and tape recordings

(B) 09-29-80 Per Curiam order that the District Court's order of September 17, 1980, denying appellants' alternative motion for a preliminary injunction, be and hereby is affirmed to the extent that it refused to restrain the lease sales currently scheduled for September 30, 1980, October 21, 1980 and November 18, 1980; and this cause shall remain under submission to enable this Court to further consider and to decide all remaining issues presented by this appeal, for which purpose jurisdiction is hereby reserved; Robinson and Wald, CJ's, and USDC Judge Harold Greene

(B) 09-30-80 Per Curiam order that the motion of Atlantic Richfield Company for leave to participate as amicus curiae is granted and that the motions to waive appendix and to waive reproduction of the record are granted; Robinson and Wald (who did not participate), CJ's: and USDC Judge Harold Greene

(B) 09-30-80 15-Amicus Curiae brief (p-25)

(T) 10-09-80 4-Appellants' motion for expedited ruling (p-8)

(T) 10-16-80 4-Appellees' motion for permission to file supplemental brief (p-16) & (p-17)

(C) 10-20-80 1-Appellees' corrected certificate of service

(T) 10-22-80 4-Appellants' opposition to appellees' motion for permission to file supplemental brief (m-21)

(R) 10-30-80 Opinion for the Court filed by Circuit Judge Wald

(R) 10-30-80 Judgment remanding this case to the District Court for further proceedings consistent with the opinion of this Court

DATE	FILINGS—PROCEEDINGS

(R) 10-30-80 Per Curiam order that the Court's opinion having issued this date, that the motion for expedited decision is dismissed; further ordered that appellees' motion for leave to file a supplemental brief is granted;

(B) 10-30-80 25-Appellees' supplemental brief (p-16)

(T) 11-13-80 4-Appellants' bill of costs (m-13)

(H) 12-8-80 Copy of opinion and certified copy of judgment and bill of costs in the amount of $999.50 issued to District Court.

(T) 01-16-81 Copy of letter from Clerk, Supreme Court in SC NO. A-616 dated January 15, 1981 extending the time for filing a petition for writ of certiorari to and including February 27, 1981

(T) 2-11-81 Receipt dated 2/4/81 from the Clerk, District Court for the certified original record (3 vols.) 4 vols. of transcript; 1 deposition and 3 brown expandable folders of exhibits

(C) 03-09-81 Notice from Clerk, SC advising that petition for writ of certiorari was filed on 2/27/81 in SC No. 80-1464

(T) 04-09-81 Certified copy of order from Clerk, Supreme Court granting the petition for writ of certiorari in SC No. 80-1464 on April 6, 1981

RELEVANT DOCKET ENTRIES

DISTRICT COURT

DATE	FILINGS—PROCEEDINGS
1979	
June 22	COMPLAINT; Affidavit of Edwin Rothschild; Appendices A thru D; Exhibit 1 thru 10.
June 22	SUMMONS (4) and copies (4) of the complaint issued. Deft. #1 ser 6-26-79. #2 ser 6-29-79; U.S. Atty. ser 7-3-79; Atty General Ser. 7-2-79.
June 25	OPPOSITION of U.S. to motion for preliminary injunction; Exhibits 1 thru 5.
June 25	MOTION of pltf. for preliminary injunction; P & A.
June 25	AMENDED MEMORANDUM of Points & Authorities of pltf. in support of their motion for a preliminary injunction; attachment.
June 26	LETTER to Clerk, James F. Davey, requesting the index which was omitted from defts.' memorandum in opposition to motion for preliminary injunction which was filed 6-25-79; attachment.
June 27	APPEARANCE of H. Bartow Farr, III as an additional attorney of record of pltfs. (CD/N)
June 25	MOTION of Western Oil & Gas Association for leave to file brief Amicus Curiae in opposition to plts.' motion for preliminary relief; Exhibit (brief)
June 29	TRANSCRIPT of proceedings of 6-27-79; Pages 1 thru 42; (Rep: C. Rebarick); court copy.
July 02	MOTION of pltfs. for entry of order modifying order of 6-27-79; memorandum; attachment.
June 27	MOTION of Western Oil & Gas Association for leave to file brief amicus curiae in opposition to pltfs.' motion for preliminary relief, heard and granted. (Rep. C. Rebarick) ROBINSON, J.

DATE	FILINGS—PROCEEDINGS

June 27 MOTION for preliminary injunction argued and taken under advisement. (Rep. C. Rebarick) ROBINSON, J.

June 27 AFFIDAVIT of pltf. of George L. Donkin; Exhibit 1.

June 27 EXHIBITS Nos. 6 & 7 of deft. in opposition to motion for preliminary injunction.

July 05 MEMORANDUM & order filed 6-27-79 denying motion for preliminary injunction. (N) ROBINSON, J.

July 06 MOTION of Western Oil & Gas Association for leave to file memorandum amicus curiae in opposition to pltfs.' motion for entry of order modifying order of 6-27-79; Memorandum; Declaration of Robert N. Harrison.

July 06 OPPOSITION of U.S. to pltf.'s motion for entry of order modifying order of 6-27-79.

July 11 MOTION of pltfs. based on subsequent events for modification of order of 6-29-79. Memorandum; Table of Contents; Appendix A thru D.

July 11 LETTER to James F. Davey, Clerk of Court, requesting correction of typographical error in a memorandum filed with the Court on 7-6-79 (opposition).

July 11 REPLY MEMORANDUM of pltfs.

July 13 ATTACHMENTS (additional) of pltfs. to pltfs.' motion, based on subsequent events, for modification of order of 6-29-79; Attachments 1 & 2.

July 13 OPPOSITION of U.S. to pltfs.' second motion for modification of order of 6-27-79

July 16 REPLY of pltfs. on their motion for modification of order of 6-29-79. affidavits of Monte Canfield, Jr (2)

DATE	FILINGS—PROCEEDINGS

July 17 MOTION of pltf. for modification of order of 6-29-79, argued and taken under advisement. (Rep: D. Bossard) ROBINSON, J.

July 17 AFFIDAVIT of George L. Donkin by pltf.; Exhibit 1 and 2.

July 17 AFFIDAVIT of H. Theodore Heintz, Jr. by defts.; Table I.

July 20 ORDER filed 7-17-79 denying pltfs.' motion for modification of Order of 6/29/79

July 19 NOTICE of appeal of pltfs. from judgment entered 7-5-79; $5.00 paid and credited; copies mailed to Bruce C. Rashkow.

July 19 NOTICE of appeal of pltfs. from judgment entered 7-20-79; $5.00 paid and credited; copies mailed to Bruce C. Rashkow.

July 20 RECORD on appeal delivered to USCA; Receipt acknowledged (79-1768)

July 23 TRANSCRIPT of proceedings of 7-17-79; Pages 1 thru 34); (Rep: D. Bossard); court copy.

July 24 SUPPLEMENTAL RECORD on appeal delivered to USCA; Receipt acknowledged (79-1633)

July 26 LETTER to Judge Robinson re: affidavit of H. Theodore Heintz, Jr.; attachment (affidavit of H. Theodore Heintz, Jr.)

July 27 APPLICATION of pltfs. for four week stay pending appellate resolution; attachments (2); memorandum; Appendix A.

July 30 OPPOSITION of defts. to pltfs.' application for 4-week stay pending appellate resolution.

July 30 MOTION by pltf. for stay pending appeal, heard and taken under advisement. (Rep: R. Weber) ROBINSON, J.

DATE	FILINGS—PROCEEDINGS

July 30 ORDER denying application of pltf. for four week stay pending appeal. (N) ROBINSON, J.

Aug. 01 TRANSCRIPT of Proceedings of 7-30-79; pp. 1-22; Rep: R. Weber (COURT COPY).

Aug. 07 REQUEST (first) of pltfs. to defts. for production of documents.

Sept. 28 MOTION by Federal defts. for enlargement of period for filing answer to complaint.

Oct. 03 ORDER filed 10-01-79, granting defts. until 10-17-79 to answer complaint; parties to submit to Court by said date certain proposed schedule. (N) ROBINSON, J.

Oct. 16 STIPULATION of defts. as to discovery.

Oct. 16 JOINT MOTION of defts. for amendment of court's order to submit proposed schedule for resolving pltfs. claim for final relief.

Oct. 16 MOTION of deft. for second enlargement of period for filing answer to complaint

Oct. 17 ORDER granting defts. until 10-26-79 to answer complaint. (N) ROBINSON, J.

Oct. 17 ORDER that parties to submit to Court by 11-15-79 certain proposed schedule. (N) ROBINSON, J.

Oct. 26 ANSWER of defts. to the complaint.

Oct. 26 CALENDARED. CD/N.

Nov. 15 JOINT STATEMENT as to schedule for resolving pltfs. claim for final relief.

Nov. 23 ORDER filed 11-21-79 that parties conclude discovery by 3-14-80; scheduling status call for 3-14-80 at 9:30 a.m. (N) ROBINSON, J.

1980

Feb. 12 REQUEST (first) by defts. for production of documents.

DATE	FILINGS—PROCEEDINGS

Feb. 13 INTERROGATORIES (first set) by defts. to pltfs.

Feb. 15 CERTIFIED copy of Judgment dated 12-20-79 from USCA affirming judgment of U.S. District Court; Opinion.

Mar. 12 MOTION of pltf. to set a new deadline for completion of discovery.

Mar. 13 STATUS CALL: further status call set 5-16-80 at 9:30 a.m. (Rep. Robert Weber) ROBINSON, J.

Mar. 17 ORDER filed 3-14-80 scheduling status call for 5-16-80 at 9:30 a.m. defts. to submit to Court certain proposed stipulation of facts by 5-6-80. (N) ROBINSON, J.

Mar. 21 TRANSCRIPT OF PROCEEDINGS taken 3-14-80; pages 1-22, (Rep. Robert M. Weber) COURT COPY

Apr. 04 ORIGINAL RECORD returned from USCA #79-1768 & 79-1787; 2 vols.; 1 exhibit; 1 supplemental record in 79-1768 only.

May 16 MOTION of pltfs. for partial summary judgment or, in the alternative, for a preliminary injunction; Statement of undisputed facts; P&A's. attachment.

May 16 FURTHER STATUS CALL: (Rep. Robert Weber) ROBINSON, J.

May 23 ORDER filed 5-22-80 that defts. submit their proposed counter stipulation within 30 days; defts. to file their motion for summary judgment & opposition to pltfs. motion for partial summary judgment within 30 days. (N) ROBINSON, J.

May 30 ANSWERS by pltfs. to defts. first set of interrogatories, materials from George Donkin.

June 23 MOTION of defts. for summary judgment, statement of material facts.

DATE	FILINGS—PROCEEDINGS

June 23 MOTION of defts. for leave to file a memorandum in excess of 35 pages. (exhibit) (memorandum), statement.

June 25 MOTION of pltfs. for extension of time to respond to defts. motion for summary judgment and to defts. opposition to pltf's motion for partial summary judgment.

June 24 INDEX and page 47 by defts. to statement of P&A in support of defts. cross-motion for summary judgment & in opposition to pltfs. motion for partial summary judgment filed 6-23-80.

June 27 MEMORANDUM by defts. in opposition to motion for extension of time.

July 02 ORDER extending pltfs. time to reply to cross-motion for summary judgment to 7-14-80. (N) ROBINSON, J.

July 07 NOTICE by pltffs. to take depositions of David Page, Alan Powers, Heather Ross, Robert Kalter, Robert Lawton, Stuart Edwards, Barbara Heller, Walter Mead, Marshall Rose and H. William Menard.

July 10 MOTION by defts. to terminate discovery; Memorandum.

July 14 MOTION by pltfs. for leave to file a reply memorandum in excess of 35 pages; Affidavit of H. Bartow Farr, III; Exhibits. (Reply memo with attachment)

July 15 DEPOSITION of H. Theodore Heintz, Jr. taken on June 17, 1980 at 9:30 a.m. for pltfs.; Attachments.

July 15 APPLICATION by pltfs. for immediate oral argument pending motion.

July 10 As of July 18, 1980, CASE reassigned from Judge Robinson to Judge Johnson.

July 17 SECOND SET of interrogatories by the defts.

DATE	FILINGS—PROCEEDINGS

July 17 OPPOSITION of pltfs. to motion to terminate discovery by August 15, 1980.

July 17 RESPONSE of pltfs. to stipulation of facts and proposed counterstipulation; exhibits A thru N (1 large brown folder).

July 22 TRANSCRIPT OF PROCEEDINGS of 5-16-80, pages 1-21 (Rep. Robert M. Weber) COURT COPY

July 29 REPLY MEMORANDUM by defts. in support of defts. cross-motion for summary judgment and in opposition to pltfs' motion for partial summary judgment, or in the alternative, for preliminary injunction index; affidavit of H. Theodore Heintz, Jr.; exhibit #14.

Aug. 05 STIPULATED MOTION of defts. to withdraw motion to terminate discovery and for expedited consideration of motions for summary judgment, memorandum, stipulation.

Aug. 08 NOTICE of filing by defts. of errata sheet in re: reply memorandum in support of defts' cross-motion for summary judgment & in opposition to pltfs. motion for partial summary judgment filed 7-29-80, attachment.

Aug. 19 CLARIFICATION OF MEMORANDUM submitted on 8-5-80.

Aug. 21 STATUS CALL: motions for summary judgment pending; motions of pltfs. and defts. to file pleading exceeding 35 pages, granted; hearing on merits and cross motions for summary judgment set for 9-2-80 at 9:30 a.m. (Rep. Sylvia Seymour) JOHNSON, J.

Aug. 22 ORDER that defts. may file a memorandum in support of defts. motion for summary judgment, etc. in excess of 35 pages, but not to exceed 50 pages. (N) JOHNSON, J.

Aug. 22 ORDER that pltfs. may file a reply memorandum in support of pltf. motion for partial summary judgment, etc., in excess of 35 pages but not to exceed 45 pages. (N) JOHNSON, J.

DATE	FILINGS—PROCEEDINGS

Aug. 25 NOTICE by defts. of filing of additional exhibits by defts.; Exhibit 13A (36 to 46), 15, & 16.

Aug. 29 TRANSCRIPT OF PROCEEDINGS, August 21, 1980, pp 1-26, (Clerk's Copy) (Rep: Sylvia Seymour).

Sept. 02 MOTION of pltfs. for partial summary judgment or for preliminary injunction, heard & taken under advisement. Motion of deft. for summary judgment, heard & taken under advisement. (Rep. Sylvia Seymour) JOHNSON, J.

Sept. 08 TRANSCRIPT OF PROCEEDINGS of 9-2-80; pages 1-98 (Rep. Sylvia Seymour) COURT COPY

Sept. 18 MEMORANDUM OPINION filed 9-17-80 denying motion of pltfs. for partial summary judgment or, in the alternative, for preliminary injunction. (N) JOHNSON, J.

Sept. 18 ORDER filed 9-17-80 denying motion of defts. for summary judgment. (N) JOHNSON, J.

Sept. 18 NOTICE OF APPEAL by pltfs. from Order filed 9-17-80; $65.00 docketing fee and $5.00 filing fee paid & credited to U.S.; copy sent to Charles W. Findlay, III.

Sept. 18 COPIES of Notice of Appeal & docket entries transmitted to USCA. USCA #80-2127.

Sept. 18 STATEMENT OF P & A by deft. in support of defts' cross-motion for summary judgment and in opposition to pltfs' motion for partial summary judgment, or in the alternative, for preliminary injunction, index, exhibits #1 through #13 (exhibits in brown folder).

Sept. 18 REPLY MEMORANDUM of pltfs. motion for partial summary judgment and pltfs' opposition to defts' motion for summary judgment, table of contents, table of citations, appendix A & B, statement of genuine issues in opposition to defts' motion for summary judgment, exhibits 1 through 15.

DATE	FILINGS—PROCEEDINGS

Sept. 22 RECORD ON APPEAL delivered to USCA. Receipt acknowledged.

Sept. 22 ORDER filed 9-19-80 amending order denying pltfs. motion for summary judgment or in the alternative for a preliminary injunction; directing the Clerk of the U.S.D.C. to file and transmit, forthwith to USCA for the District of Columbia this order as a supplement to the record. (N) JOHNSON, J.

Sept. 22 SUPPLEMENTAL RECORD transmitted to USCA. (USCA #80-2127) Receipt acknowledged.

Sept. 29 COPY of USCA Order dated 9-29-80, that District Court's order of 9-17-80 ORDERED & ADJUDGED by this Court that the District Court's order of 9-17-80, denying appellants' alternative motion for a preliminary injunction, be & hereby is affirmed to the extent that it refused to restrain the lease sales currently scheduled for 9-30-80, 9-21-80 and 11-18-80; and this cause shall remain under submission to enable this Court to further consider & to decide all remaining issues presented by this appeal, for which purpose jurisdiction is hereby reserved. (USCA#80-2127)

Dec. 03 CONSENT MOTION for entry of order directing the promulgation of regulations under Section 8 (a) (1) (E) and (G) of the Outer Continental Shelf (OCS) Lands Act, 43 U.S.C. 1337(a) (1) (E) and (G), affidavit of Heather L. Ross, attachment; affidavit of Robert H. Lawton.

Dec. 03 STATUS CALL: parties have stipulated re: possible settlement of case. Defts. are to decide by 1-28-81 whether to seek Supreme Court review of case. (Rep. Sylvia Seymour) JOHNSON, J.

Dec. 08 CERTIFIED COPY of Judgment dated 10-30-80 from USCA Ordered & Adjudged by this Court, that the order of the District Court on review herein, which refused to enjoin the lease sales scheduled for the fall of

DATE	FILINGS—PROCEEDINGS

1980, is affirmed, in accordance with this Court's order filed 9-29-80; respondents are directed to proceed expeditiously to issue the regulations required by the Outer Continental Shelf Lands Act, and this case is Remanded to the District Court for further proceedings consistent with the opinion of this Court (USCA#80-2127) OPINION

Dec. 08 BILL OF COSTS as taxed by Clerk of Court of Appeals in the amount of $999.50 to be taxed against appellee. (USCA#80-2127)

Dec. 19 STIPULATION that on 1-28-81, unless defts. have meanwhile determined to seek Supreme Court review of the opinion & judgment of the Court of Appeals issued on 10-30-80 the "Judgment on First Cause of Action" will be submitted for entry by the Court. APPROVED. (FIAT) (N) Johnson, J.

Dec. 29 ORDER filed Dec. 19, 1980 directing that the Deft. Secretary of Energy shall issue proposed regulations and report to this Court the status of compliance. (See order for details) (N) Johnson, J.

Dec. 30 DEPOSITION of H. Theodore Heintz, Jr. taken June 16, 1980 for the pltffs.; Exh. 1, 2, 3, & 4.

1981

Jan. 05 TRANSCRIPT OF PROCEEDINGS, December 3, 1980, pages 1-9; (Rep: Sylvia Seymour) COURT COPY.

Jan. 30 NOTICE of Agreement Modifying stipulation of 12-2-80 date substituted is 2-3-81. Approved. (fiat) (see for details) JOHNSON, J.

Feb. 03 NOTICE by defts. to the Court that stipulation of 12-2-80 has no force & effect since defts. have decided to seek Supreme Court review of the decision of USCA issued on 10-30-80.

Feb. 09 ORIGINAL RECORD returned from USCA (3) vol., (4) transcripts, 1 deposition & 3 brown expandable folders of exhibits. (USCA#80-2127)

DATE	FILINGS—PROCEEDINGS

Feb. 26 MOTION by pltfs. for immediate entry of judgment pursuant to the opinion & judgment of the Court of Appeals, attachment.

Feb. 27 NOTICE by pltfs. to take deposition of Charles W. Findlay, III.

Mar. 02 MOTION by defts. for stay of deposition, attachment.

Mar. 02 STATUS REPORT (first) of defts., attachment.

Mar. 03 OPPOSITION by pltfs. to motion for stay of deposition.

Mar. 04 NOTICE by defts. of filing attachment A of defts. reply to pltfs. opposition to motion for stay of deposition, attachment A.

Mar. 04 MOTION of deft. for stay of deposition (Heather Ross), granted. Deposition stayed pending ruling on motion for protective order. Deft. is to file motion for protective order by 3-17-81. Motion of pltf. for entry of judgment is set for 3-13-81 at 2:00 p.m. deft is to file opposition, if any, by 3-11-81. (Rep. Sylvia Seymour) JOHNSON, J.

Mar. 05 MEMORANDUM filed 3-4-81 on Governments Duty to experiment with Non-Cash Bonus and Variable Net Profit Share Leasing. JOHNSON, J.

Mar. 11 OPPOSITION by defts. to pltfs. motion for entry of partial judgment, attachment A.

Mar. 12 REPLY MEMORANDUM by pltfs. in support of judgment.

Mar. 13 MOTION of pltf. for entry of judgment, granted. Deft. is to file motion for protective order by 3-17-81, Pltf. will respond by 3-26-81, motion for protective order set for 4-6-81 at 9:30 a.m. (Rep. Sylvia Seymour) JOHNSON, J.

DATE	FILINGS—PROCEEDINGS

Mar. 18 JUDGMENT filed 3-13-81 on First Cause of Action; awarding pltfs. their costs under the first cause of action; the Court reserves action on the remaining causes of action pending completion of discovery, etc. (N) JOHNSON, J.

Mar. 23 MOTION by defts. for protective order, memorandum.

Mar. 26 WITHDRAWAL by pltfs. of deposition notice for Assistant Secretary Heather Ross filed 7-7-80.

Mar. 26 SUGGESTION OF MOOTNESS by pltfs.

Apr. 01 MOTION by defts. for dismissal of third cause of action.

Apr. 01 REPLY by defts. to pltfs. suggestion of mootness & memorandum.

Apr. 01 STATUS REPORT (second) of defts., attachment.

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GOVERMENTAL LESSOR AND CONSUMER PLAINTIFFS

v.

CECIL D. ANDRUS, Secretary of the Interior,
JAMES R. SCHLESINGER, Secretary of Energy, and
THE UNITED STATES OF AMERICA, DEFENDANTS

COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

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First Cause of Action: In Violation of the Outer Continental Shelf Lands Act Amendments, Defendants Have Failed to Issue Regulations to Implement the Bidding Systems Authorized by the 1978 Amendments, and Propose to Continue to Use Inferior Bidding Systems that Do Not Assure Receipt of Fair Value, Adequate Competition, or Efficient Development 89

Second Cause of Action: Cash-Bonus, Low-Royalty Bidding Systems, Which Do not Assure Receipt of Fair Value, Do Not Promote Competition in the Lease Sale Market or in the Production of Oil, and Do Not Adequately Encourage Development of Outer Continental Shelf Oil and Gas, Are Inconsistent with the Outer Continental Shelf Lands Act and Article IV, Section 3, Cl. 2 of The United States Constitution 93

Third Cause of Action: The Default of Defendants In Assuring That Leases Met Statutory Objectives Requires a Comprehensive Investigation by Defendants to Facilitate Appropriate Corrective Action 96

COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

This action is brought by the Energy Action Educational Foundation, State Lands Commission of California, the City of Long Beach, California, various representative organizations and consumers of natural gas and oil products, federal taxpayers, and citizens of the United States against the United States, the Secretary of the Interior and the Secretary of Energy to prevent further violation of the Outer Continental Shelf Lands Act, as amended, and to redress past violations of the Act. The Complaint charges that defendants, contrary to the Act, have leased the oil and gas resources of the Outer Continental Shelf under a cash-bonus bidding system with pre-set low royalties that has not provided adequate information, promoted adequate competition or distribution of resources among private enterprises, stimulated development of oil and gas, or returned fair value for the sale of public resources. The Complaint further charges that defendants intend to continue to use the cash-bonus, low-royalty system for future leases, despite the fact that it is inherently incapable of meeting the objectives of the Act and despite recognition by defendants and other federal officials that other leasing systems are more advantageous to the public, and that defendants have failed to take the steps necessary to make fully available other systems that better meet the statutory criteria for federal offshore leasing.

Plaintiffs include consumers of natural gas and oil products who complain of the violation of the statutory assurances that Outer Continental Shelf properties shall be leased to promote competition and to achieve prompt development of energy resources, as well as taxpayers and competing lessors of offshore oil and gas properties who complain that the leasing system employed by defendants grants public rights to private developers for less than their fair value.

Plaintiffs seek three separate forms of relief: (1) Declaratory and injunctive relief prohibiting the defendants from holding any further lease sales until the required regulations for implementing other, superior bidding systems have been promulgated; (2) Declaratory and injunctive relief prohibiting any further leasing by cash-bonus, low-royalty bidding systems that do not meet the requirements of the Outer Continental Shelf Lands Act, as amended; and (3) An Order directing defendants to review all past leases to determine whether their issuance and continuance was consistent with the requirements of the Outer Continental Shelf Lands Act and, if not, to take any appropriate corrective action.

JURISDICTION AND VENUE

1. This Court has jurisdiction over this action pursuant to 43 U.S.C. § 1349 (the Outer Continental Shelf Lands Act), 28 U.S.C. § 1331, 28 U.S.C. § 1361, and 28 U.S.C. § 2201.

2. Defendants reside, and the causes of action arose, in this District.

THE PARTIES

3. *Organizational Consumer Plaintiffs:*

The following organizational plaintiffs are consumers of natural gas and/or oil products and represent consumers of natural gas and/or oil products.

a. Plaintiff Energy Action Educational Foundation is a nonprofit research and educational organization supported by private citizens, who are taxpayers and consumers of natural gas and oil products. Energy Action specializes in the analysis of energy issues affecting its supporters and other similarly situated citizens. It has frequently testified before Congress and provided its views to defendants and various citizen groups regarding the matters raised in this action. See Appendix B.

b. Plaintiff Consumer Federation of America, a New York corporation, is composed of over 220 national, state,

and local consumer organizations located throughout the nation, representing over 30 million American consumers. Since its inception, Consumer Federation has worked to promote national energy policies and programs benefiting consumers of natural gas and oil products.

c. Plaintiff Consumer Energy Council of America is a broad-based coalition of consumer, labor, farm, public power, rural electric cooperative, urban, and senior citizen organizations formed to advocate the consumers' interest in national energy policy. Its member organizations are listed in Appendix A.

d. Plaintiff Michigan Citizens Lobby is the largest consumers organization in Michigan, with a membership of approximately 65,000 families, and has represented its membership before government bodies on numerous energy-related issues.

e. Plaintiff Arkansas Consumer Research, Inc., is a nonprofit organization, supported principally by contributions from consumers of oil and gas, with a membership of over one thousand persons throughout the State of Arkansas.

f. Plaintiff Service Employees International Union is a 600,000-member union of health care, building maintenance, and public service workers throughout the United States and Canada.

g. Plaintiff International Association of Machinists is a union with nearly one million members, which has worked for legislation to assure adequate federal monitoring and control of energy resources.

h. Citizen/Labor Energy Coalition is a coalition of over 100 member organizations made up of labor unions, church groups, and elderly, minority, consumer, and environmental groups interested in establishing a national energy policy reflecting the needs of American citizens. Its member organizations are listed in Appendix A.

i. Plaintiff Texas Consumer Association, is a voluntary consumer group comprised of over 800 individual taxpayers and consumers.

Individual Consumer, Taxpayer, and Citizen Plaintiffs

j. Plaintiff M. James Doling is a consumer of natural gas and/or oil products. He is a citizen and taxpayer of the United States.

k. Plaintiff Paul Casagrande is a consumer of natural gas and/or oil products. He is a citizen and taxpayer of the United States.

l. Plaintiff Kathleen F. O'Reilly is a consumer of natural gas and/or oil products. She is a citizen and taxpayer of the United States.

Governmental Lessor and Consumer Plaintiffs:

m. Plaintiff California State Lands Commission (sometimes hereinafter referred to as the "Commission") is an agency of the State of California, established pursuant to the statutes of that State with the authority and responsibility for administration and supervision of certain public lands of that State. In particular, the Commission is authorized to administer the ungranted sovereign tidelands, those areas of land and water lying seaward of the line of high tide to the outer boundary of the State, which tidelands are held in trust for the people of the State. Pursuant to the statutes of California, the Commission is responsible for proper exploitation of the mineral resources in, under or upon such public lands, and for the administration or supervision of all contracts or leases for oil or gas production from the tidelands, including the sale of such oil and gas owned by the State or held in trust for the State. The Commission is also responsible for the administration of the State's interest in certain granted tidelands, particularly including responsibilities set forth in Chapter 138, Capitol Statutes of 1964 (First Extraordinary Session) as to granted tidelands in the City of Long Beach, which responsibilities include collecting and accounting for State revenues derived from the production of oil and gas from said granted tidelands within the City of Long Beach.

n. Plaintiff City of Long Beach (sometimes hereinafter referred to as "Long Beach") is a municipal corporation established under the Constitution and statutes of the State of California. Pursuant to statute, particularly including Chapter 138 of the Laws of the 1964 First Extraordinary Session of the Legislature of the State of California, Long Beach has been granted trust authority and responsibility for the operation of oil and gas production from tidelands in the Long Beach Harbor area, as specifically described in said Chapter 138. This authority and responsibility is to be exercised jointly with or subject to the approval of the California State Lands Commission.

4. The injuries of the respective plaintiffs are set forth at paragraphs 129-132, *infra.*

5. *Defendants:*

a. Defendant United States hold title to all lands and resources of the Outer Continental Shelf for the benefit of citizens of the United States.

b. Defendant Cecil D. Andrus is Secretary of the Department of the Interior (sometimes hereinafter referred to as the "Secretary") and is sued in his official capacity. Congress has conferred on the Secretary of the Interior principal responsibility for administering the leasing of federal offshore lands pursuant to the Outer Continental Shelf Lands Act.

c. Defendant James R. Schlesinger is Secretary of the Department of Energy and is sued in his official capacity. Congress has transferred from the Secretary of the Interior to the Secretary of Energy responsibility for promulgating regulations governing the use of bidding systems authorized by Section 8(a)(1) of the Outer Continental Shelf Lands Act, as amended, as well as other obligations under the Act.

FACTUAL ALLEGATIONS

6. The present system of leasing oil and gas resources on the Outer Continental Shelf is conducted pursuant to the Outer Continental Shelf Lands Act, as amended, 43 U.S.C. §§ 1331, *et. seq.* Although Congress has made manifest its intention that offshore leasing should be managed, with adequate geological information, to promote competition, to encourage prompt development, and to assure the receipt of fair value, defendants have adhered, and continue to adhere, to historical practices that do not, and cannot, meet these objectives.

Section I: Early Exploration and Development of Federal Mineral Lands.

7. The early exploration and development of public lands, with some exceptions, was conducted without a formal statutory framework. Prospectors staked mining claims and began operations without license or title, although without prohibition, from the Federal Government. These operations then gave rise to implied rights in the lands and the minerals produced.

8. Following the California gold rush and other mining expeditions in the West, pressure increased on Congress to adopt legislation regulating exploration for and development of public resources. In response, Congress passed the Act of July 26, 1866, which declared "the mineral lands of the public domain . . . to be free and open to exploration and occupation," subject to governmental regulations and "to the local customs or rules of miners in the several mining districts." 14 Stat. 251 (1866). The 1866 Act did not provide for the leasing of public lands; it conveyed legal title to claimants meeting the established requirements.

9. Six years later, Congress passed the Act of May 10, 1872, which superseded the 1866 Act in its entirety. The General Mining Law of 1872, like its predecessor, pro-

vided for the sale, not the lease, of public lands. Section 1 of the Act stated:

> "Except as otherwise provided, all valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, shall be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase, by citizens of the United States and those who have declared their intention to become such, under regulations prescribed by law, and according to the local customs or rules of miners in the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States." 30 U.S.C. § 22.

Section 6 of the Act provided that: "[a] patent for any land claimed and located for valuable deposits may be obtained" by filing an application and "a certificate of the United States Chief Cadastral Engineer that $500 worth of labor has been expended or improvements made upon the claim by himself or grantors." 30 U.S.C. § 29. Publication of the application was required, and if no adverse claim was filed it was assumed that the applicant was entitled to a patent, "upon the payment to the proper officer of $5 per acre." *Ibid.*

10. The General Mining Law of 1872, with its generous provisions to encourage development of mineral resources, governed most mineral exploration and development for the next fifty years. During that period, however, there was increasing concern about conservation of valuable resources. For example, the Director of the United States Geological Survey submitted a report in 1909 to the Secretary of the Interior noting that oil lands in California were being patented by private parties at such a rate that it would "be impossible for the people of the United States to continue ownership of oil lands for more than a few months. After that the Government will be obliged to repurchase the very oil that it is practically giving away. . . ." *See United States* v. *Midwest*

Oil Co., 236 U.S. 459 (1915). The result of this concern was that large areas of land were withdrawn by presidential proclamation and were no longer subject to patenting under the General Mining Act of 1872.

11. The withdrawals led to a controversy that Congress resolved in 1920 by passing the Mineral Lands Leasing Act, now codified at 30 U.S.C. § 181 *et. seq.* The final Conference Report accompanying the bill stated:

> "The legislation provided for herein, it is thought, will go a long way toward the development of the West and of the national resources of the West and at the same time reserve to the Government the right to supervise, control, and regulate the same, and prevent monopoly and waste and other lax methods that have grown up in the administration of our public-land laws. In addition thereto, royalties and rentals are provided, so that the government may not be passing title to the natural resources without receiving something in return therefor." H.R. Report No. 1138, 65th Cong. 3d Sess., p. 19 (1919).

One federal court has said that the Mineral Lands Leasing Act was "the expression of a new policy for the disposition of public lands open to exploration or entry, by lease, instead of by complete alienation." *West* v. *Work*, 56 App. D.C. 191, 11 F.2d 828, 831, *cert. denied*, 271 U.S. 689.

12. Section 1 of the Mineral Lands Leasing Act stated that:

> "[D]eposits of . . . oil . . . or gas, and lands containing such deposits owned by the United States . . . shall be subject to disposition in the form and manner provided by this chapter . . . ." 30 U.S.C. § 181.

Section 17 of the Act then provided that the principal method of disposition was to be by lease. 30 U.S.C. § 226(a). The procedure for leasing under the statute

depended upon the nature of the lands to be leased. If they were

> "not within any known geological structure of a producing oil or gas field, the person first making application for the lease who is qualified to hold the lease under this chapter shall be entitled to a lease of such lands without competitive bidding. Such leases shall be conditioned upon payment by the lessee of a royalty of 12½ per centum in amount or value of the production removed or sold from the lease." 30 U.S.C. § 226(c).

If, on the other hand, the lands were

> "within any known geological structure of a producing oil or gas field, they shall be leased to the highest responsible qualified bidder by competitive bidding under general regulations in units of not more than six hundred and forty acres which shall be as nearly compact in form as possible, upon the payment by the lessee of such bonus as may be accepted by the Secretary and of such royalty as may be fixed in the lease, which shall be not less than 12½ per centum in amount or value of the production removed or sold from the lease." 30 U.S.C. § 226(b).

The Act, therefore, gave the Secretary of the Interior the power not only to collect cash bonuses in competitive bidding but also to establish a royalty rate for competitive leases higher than the specified 12½%.

13. The Act also provided for a rental on all leased lands "of not less than 50 cents per acre for each year of the lease." 30 U.S.C. § 226(d). Once oil or gas in paying quantities had been discovered on the lands, a minimum royalty of $1.00 per acre was payable in lieu of rental. Competitive leases were for a primary term of five years, while noncompetitive leases were for a primary term of ten years. Each lease was to continue "so long after its primary term as oil or gas is produced

in paying quantities." 30 U.S.C. § 226(e). The Secretary was authorized to terminate leases for nonperformance after notice and an opportunity to correct any default. 30 U.S.C. § 226(f).

14. Most leases issued under the 1920 Act have been issued noncompetitively; an estimate made by the Department of the Interior in 1972 indicated that over ninety percent of the leases were noncompetitive. For those leases, the royalty is set at 12½% of the value of production. For competitive leases, the Secretary has established a sliding royalty rate that increases from 12½% to less than twenty-five percent if production exceeds 400 barrels per well per day. For gas the royalty is 12½% if production is less than 5,000 Mcf per well per day and 16⅔% if production exceeds 5,000 Mcf. Cash bonus payments for leases under the 1920 Act have not been substantial, totalling less than $40 million for the period of 1950 through 1973.

Section II: Leasing of Federal Offshore Lands: the 1953 Outer Continental Shelf Lands Act.

15. Although onshore mining activities have had a long history, federal leasing of offshore lands containing oil and gas did not begin until 1954. Earlier, it was generally assumed that states had title to the lands off their shores. Oil drilling had begun off the California coast in 1879 and California, Louisiana, and Texas had all claimed statutory authority to lease offshore lands. In 1934, the Interior Department refused to issue a drilling permit off the California coast on the ground that California owned the land. *Joseph Cunningham*, 55 I.D. 1, 2 (1934). At that time, the Secretary of the Interior stated that "[t]itle to the soil under the ocean within the three-mile limit is in the State of California, and the land may not be appropriated except by authority of the State." *Ibid.*

16. In 1938 and 1939, resolutions were introduced in Congress to appropriate for the United States the lands

lying within three miles of state boundaries. These resolutions were unsuccessful. In 1945, contrary resolutions were introduced in the Congress, seeking to quiet title in these lands to the State. These resolutions passed in 1945, but were vetoed by President Truman.

While these resolutions were pending, the Attorney General of the United States brought an action against the State of California, alleging that the United States "is the owner in fee simple of, or possessed of paramount rights in and power over" the submerged land within three miles of the California coast. In 1947, the Supreme Court held that the United States had full title to all offshore lands and that the State of California "has no title to or property interest therein." *United States* v. *California*, 332 U.S. 19. Subsequent decisions affirmed the title of the United States to Outer Continental Shelf lands in the Gulf of Mexico. *United States* v. *Texas*, 339 U.S. 707; *United States* v. *Louisiana*, 339 U.S. 699.

17. During the late 1940's and early 1950's, Congress held extensive hearings and debates regarding allocation of responsibility between state and Federal governments for the administration of offshore resources. The principal question before Congress was whether to override the decision in *United States* v. *California* and the subsequent decisions, and to return to the states juirsdiction over the lands within three miles of their boundaries.

18. Supporters of state control pointed out that the states had substantial experience in conducting leasing operations offshore, while the Federal Government had none. Proponents of state control also argued that the states had been able to exact far higher payments under their leases with the oil companies than the Federal Government had been able to do on its onshore leases. For example, the Commissioner of the General Land Office in Austin, Texas, testified that the State received royalties as high as 52½% on some onshore lands and 51½% in the marginal sea. "Title to Submerged Lands Beneath Tidal and Navigable Waters": Hearings on S.

1988 and Similar House Bills Before the Senate Committee on the Judiciary and the House Committee on the Judiciary, 80th Cong., 2d Sess. 415 (1948). The Attorney General of California submitted figures showing that the average oil royalty on state leases in California was approximately 23.79%, while that of the Federal Government was approximately 11.83%. *Id.*, at 918. The City Attorney of Long Beach testified that under a 1947 agreement the City received 94.1% of the proceeds of the sale of offshore oil and gas produced, from which it was required to pay drilling and maintenance and operations costs, but was in any event guaranteed a net minimum of 60.01% of the gross revenues. *Id.* at 784-785. Other witnesses testified about royalty returns under leases of nearly 30%, *id.* at 845, 50½%, *id.* at 1137, and 52½%, *id.* at 1245, in California and Texas.

19. Federal officials also criticized the rate of return under federal leases. For example, The Attorney General of the United States, Tom C. Clark, referring to the California Long Beach lease, observed:

> "So we say that if Long Beach can get eighty-five percent, maybe the Federal Government can get more than ⅛th." *Id.* at 685.

Former Secretary of the Interior, Harold Ickes, testified that the current federal system of onshore leasing did not provide for sufficient royalties, and urged that "the Congress ought to pass a fair bill, providing for fair royalties, and then let the Secretary of the Interior administer it; hold him responsible if he does not." *Id.* at 1183.

20. Congress was equally concerned that the Federal Government improve its leasing programs to encourage competition in the sale of leases and in the production of oil. A House Report, H.R. Rep. No. 695, 82d Cong., 1st Sess. (1951), emphasized that

> "[f]inding oil calls for a variety of efforts by a number of operators, and by a policy of free and

> open exploration a number of operators may explore the same areas and may compete in the bidding, thereby increasing the return to the government and also greatly enhancing the chances of discovering oil or gas in the area." *Id.* at 7.

Accordingly, the Report stated that "competitive bidding" is

> "the only sound basis upon which leases should be granted. Such procedure gives all interested operators a chance to secure leases upon the leasing units which are the subject of bidding." *Id.* at 8.

The Report also stressed the need to "prevent concentration of holdings in any one operator and . . . thus ensure wide ownership of leases among the limited number of qualified operators." *Id.* at 9.

21. In 1953, Congress passed the Submerged Lands Act, 43 U.S.C. § 1301 *et. seq.*, relinquishing federal title to all land up to three miles from the coastline of any state. Although earlier versions of the Bill also included provisions to govern federal leasing beyond the three-mile limit, those provisions were deleted before final passage.

22. Later in 1953, Congress passed the Outer Continental Shelf Lands Act ("The OCS Act"), to provide for the leasing of lands beyond the three-mile limit. 43 U.S.C. § 1331 *et. seq.* This Act, which remained essentially unchanged until 1978, gave to the Secretary of the Interior extensive responsibility for administering leases of federal offshore lands.

23. The OCS Act sought to assure that the Government received a fair return for the minerals produced under offshore leases. Unlike the Mineral Lands Leasing Act of 1920, therefore, the Act included no provision for the awarding of leases without the safeguard of competition. To secure a fair return, Section 1337 provided that the Secretary "was authorized to grant to the highest responsible qualified bidder by competitive bidding

under regulations promulgated in advance, oil and gas leases on submerged lands of the Outer Continental Shelf . . . ."

24. The OCS Act, also unlike the Mineral Lands Leasing Act of 1920, provided different methods under which the Secretary could offer leases for competitive bidding. Section 1337 provided that

> "[t]he bidding shall be (1) by sealed bid, and (2) at the discretion of the Secretary, on the basis of a cash bonus with a royalty fixed by the Secretary at not less than 12½ per centum in amount or value of the production saved, removed or sold, or on the basis of royalty, but at not less than the per centum above mentioned, with a cash bonus fixed by the Secretary."

The legislative history shows that the Congressional decision to allow leasing systems other than the traditional cash-bonus bidding used in onshore operations was a deliberate one adopted in the face of substantial industry opposition. For example, Hines H. Baker, President of Humble Oil and Refining Company, argued that

> "[l]eases should be awarded to responsible and qualified bidders upon the basis of the highest bonus payment offered. Rentals and royalties should not be subject to bidding but should be uniform and fixed in all leases . . . . Selection of the successful bidder on the basis of the highest bonus payment offered, with rentals and royalties being fixed for all leases, is recommended because that method will assure the higher monetary return to the government as lessor and will secure more responsible operators." "Conservation and Control of Submerged Coastal Lands. . . .": Hearings on H.R. 5991 and H.R. 5992 Before the House Judiciary Committee, 81st Cong., 1st Sess. 151 (1949).

Congress nevertheless elected to give to the Secretary of the Interior the flexibility to adopt other systems.

25. Section 1334 increased the flexibility of the bidding systems allowed in Section 1337 by specifically granting the Secretary the power to promulgate regulations for the "reduction of rentals or royalties." Thus, the Secretary was not bound to an original royalty figure specified in a lease if reduction was necessary to serve other important purposes of the Act, such as the maximum efficient development of the resources. The Secretary was also given authority to "prescribe such rules and regulations as may be necessary to carry out" the leasing provisions of the 1953 Act.

26. Section 1340 gave the Secretary the important power to authorize exploration of the Federal offshore lands. It provided that

> "[a]ny agency of the United States and any person authorized by the Secretary may conduct geological and geophysical explorations in the Outer Continental Shelf, which do not interfere with or endanger actual operations under any lease maintained or granted pursuant to this subchapter and which are not unduly harmful to aquatic life in such area."

It was possible, therefore, for the Government either to do its own exploratory work prior to selling resources or to contract with private firms to conduct such exploration.

27. Section 1337(b) established that leases were to be "for a period of five years and as long thereafter as oil or gas may be produced from the area in paying quantities, or drilling or well-reworking operations as approved by the Secretary are conducted thereon . . . ." The Act specifically provided, however, that the Secretary "may cancel any lease obtained by fraud or misrepresentation." 43 U.S.C. § 1337(i). In addition, the Act allowed for cancellation in the event of noncompliance with the provisions of the statute, regulations, or the lease itself. 43 U.S.C. § 1334(b)(1)(2). The Secretary was given the power to cancel a nonproducing lease without resort to

the Federal Courts, and he was authorized to cancel a producing lease by initiating an appropriate forfeiture proceeding in District Court.

28. The Act also stressed the need for prompt exploitation of the offshore resources. Section 1337(a) specifically stated that the Secretary was granted his broad powers "[i]n order to meet the urgent need for further exploration and development of the oil and gas deposits of the submerged lands of the Outer Continental Shelf."

29. The Outer Continental Shelf Lands Act of 1953 thus committed Congress to a leasing program that generated increasing knowledge about the value and potential of the resources on the Outer Continental Shelf, enhanced competition, expedited development of oil and natural gas resources, and obtained a fair return to the public by the use of flexible bidding systems. In so doing, the OCS Act met the objectives expressed by Secretary McKay of the Department of the Interior, who had urged that proposed legislation

> "should . . . empower the Department of the Interior or such other department or agency as the President may designate, to take appropriate action to prevent waste, to provide for exploration and development, to supervise production, and to recover fair and just revenues for the benefit of the Nation as a whole." "Submerged Lands": Hearings on S.J.Res. 13 *et. al.* Before the Senate Committee on Interior and Insular Affairs, 83rd Cong., 1st Sess. 512-513 (1953).

Section III: The Results of a Cash-Bonus, Low-Royalty Bidding System from 1954-1978: Inadequate Competition, Slow Development, and Denial of Fair Return.

30. Federal offshore leasing from 1954 to 1978 divides into roughly two phases. From 1954 through 1972 the federal offshore leasing program was conducted at a

reasonable pace in an era of relatively normal market conditions and stable oil and gas prices. During that time, the Secretary leased an average of 425,000 acres per year. In the same period, the price of oil never exceeded $3.40 per barrel, and the average price of natural gas never exceeded $.19 per Mcf.

The leasing activity changed significantly in 1973. Early in 1973, President Nixon directed the Secretary of the Interior to increase the acreage to be leased on the outer Continental Shelf to 3,000,000 acres per year, and in January 1974, he directed that acreage be increased to 10,000,000 acres a year beginning in 1975. Although the leasing program fell far short of that goal, the average yearly acreage leased after 1972 has substantially exceeded 1,000,000 acres.

At the same time, price rises for oil and gas have commenced and continued. In late 1973, members of the Organization of Petroleum Exporting Countries (OPEC) proposed an embargo on exports of oil. This action, along with other factors, caused a sharp increase in the price of crude oil. Compared to a base price of $3.40 in 1972, the highest price for domestic crude oil reached $9.51 a barrel in December 1973, $11.08 a barrel by December 1974, $13.98 a barrel by December 1977, and is now $16.00 a barrel.

The average price of natural gas also advanced rapidly. By 1974 the price of natural gas had risen to $.30 per Mcf (compared to $.19 in 1972). By 1978 the price had increased to $.92 per Mcf. Today, the price for gas found on new Outer Continental Shelf leases is $2.40 per Mcf.

31. Although the OCS Act clearly provided for other methods of bidding, in the face of industry opposition to such other methods, every one of the lease sales held by the Secretary from 1954-1972 was conducted pursuant to a cash-bonus, low-royalty system. This system specified that the lessee of a particular tract should pay a royalty of 16⅔% of the value of any production from

the lease—or approximately four percent above the statutory minimum. The lease was then awarded to the bidder who offered the highest cash bonus in advance by sealed bid.

32. Despite the effects of the developments discussed in paragraph 30, *supra*, the Secretary also has conducted every lease sale from 1973 through 1978, with only two exceptions (see paragraphs 73 and 74, *infra*), on the basis of cash-bonus bidding with pre-set royalty rates. In the vast majority of sales, the royalty was set at the usual low 16⅔%. In a few cases, the Secretary employed a sliding-scale royalty that increased as the value of production increased.

33. Although the 1953 OCS Act gave the Secretary substantial powers to achieve the objectives of the Act, discussed in paragraph 29, *supra*, the Secretary has not exercised those powers in the public interest. During the first twenty-five years of federal offshore leasing, the Secretary has pursued a program that has (a) failed to provide the Government with adequate information for effective leasing by auction, (b) failed to promote competition in the lease sale market, (c) failed to stimulate competition in the production of crude oil and gas, (d) failed to encourage development, and (e) failed to assure or obtain fair market value. As a result, the major oil and gas companies have received substantial benefits from the federal leasing program at the expense of consumers, taxpayers, and the public treasury.

A. *The Government Has Had Inadequate Geological Information to Assure Receipt of Fair Value Through Cash-Bonus Bidding.*

34. The Secretary has continually conducted his leasing program without obtaining adequate information about the resources to be leased. As a result, tracts are frequently leased without sufficient information to evaluate the relationship of the high bid to the fair value of the resources to be discovered. See paragraphs 39 and

40, *infra*. Moreover, this lack of information increases the risks to the companies, inhibits competition from smaller, independent producers, and thus decreases the number and size of bids. See paragraph 37, *infra*.

35. Although the 1953 Outer Continental Shelf Lands Act expressly conferred power on the Secretary to conduct exploratory drilling, the Secretary has not exercised that power to develop meaningful pre-lease information about Outer Continental Shelf resources. Nor has the Secretary required, as a condition of issuing pre-lease exploration permits, that the permittees make all information in their own possession available to the Federal Government and others willing to share the cost. In the twenty-five years of federal offshore leasing, the Secretary has never contracted for the drilling of an onstructure well to obtain a reliable estimate of the value of resources to be sold, nor has he allowed others to do so.

36. The Government has relied heavily on industry nominations in determining the tracts to be offered for lease. This process is grossly unreliable because the companies may overnominate to disguise interest in particular tracts, and companies typically have not been required to share all available information with the Government, even if obtained pursuant to exploration permits granted by the Government. The Government ordinarily does not have sufficient information of its own to distinguish the desirable tracts from the undesirable tracts nominated by the companies and to select the appropriate tracts for leasing. Moreover, the Federal Government has failed to generate further information or to evaluate more completely the information submitted to it. See paragraph 94, *infra*.

37. The failure of the Secretary to obtain adequate resource information imposes on prospective bidders under a cash-bonus bidding system a substantial burden of risk that few can assume. Without sufficient information about the potential resources to be acquired, and without assurance that the Government is able to select

the most desirable tracts, smaller, independent producers cannot obtain financing for the substantial cash bonuses that must be paid, with consequent further lessening of competition in the bidding process.

38. When information is insufficient to determine whether the highest bids accurately reflect the value of the resource to be leased, and when capital barriers limit competition in bidding for tracts, the Government cannot assure the receipt of fair value for its leases. As a 1975 Congressional Report indicated,

> "[a]s long as competition for a tract is high, the accuracy of the presale value as an estimate of the true resource value is relatively unimportant, since competitive forces can be assumed to keep the high bids fairly close to the true value. However, as the number of tracts receiving only one or two bids increases, the presale value becomes a major factor for assuring that fair market value is received for each tract."

An Analysis of the Department of Interior's Proposed Acceleration of Development of Oil and Gas on the Outer Continental Shelf, Committee on Commerce and Members of the National Ocean Policy Study, March 5, 1975, at 4.

39. The presale evaluations by the Department of the Interior have proved wholly unreliable indicators of actual bidding values. For example, in lease sales held between May 1968 and December 1972, the presale evaluations by the Department amounted successively to only 17%, 26%, 58%, 82%, 18%, 14%, 11%, 5%, and 24% of the winning bids. In those same lease sales, tracts were awarded to a single bidder with no competitors, 22%, 24%, 65%, 38%, 32%, 0%, 18%, 6% and 13% of the time, and to one of two bidders another 14%, 31%, 15%, 37%, 36%, 5%, 37%, 18% and 9% of the time. The Secretary, therefore, was awarding substantial numbers of leases with almost nonexistent bidding competition and, at the same time, without a realistic evalu-

ation of the bidding value that the tracts should have commanded and would have commanded with adequate competition.

40. After 1972, when acreage leased was increased and oil prices started climbing, the presale evaluations by the Department of the Interior, which now had to assess even more volatile conditions, bore even less resemblance to the winning bids. In the first four lease sales of 1973 and 1974, for example, the presale evaluations averaged 22.9%, 9.7%, 29.1% and 17.5% of the winning bids. Furthermore, when competition for a particular tract was greater, the difference between the winning bid and the presale evaluation increased dramatically.

41. The lack of information obtained by the Government is reflected not only in bid figures but also in production figures. Many leases produce oil and gas in substantially greater quantities than the Government anticipated at the time of leasing. For example, thirteen of the tracts offered at the December 15, 1970 Gulf of Mexico sale were awarded for bonus bids of $257,733,824. By the end of 1976, an early point in their production history, these leases had yielded $1,433,269,160 in revenues to the lessees. The cash-bonus, low-royalty bidding system gives the Government, and thus the public, very limited participation in the unexpected benefits of high production and rapidly increasing prices. Where there is little or unreliable presale information, it is less likely that the cash bonus will capture at the outset a proper share of revenues from future substantial production or increasing prices and more likely that the lessees will obtain undue profits at the expense of the public.

B. *The Cash-Bonus, Low-Royalty System Has Prevented Adequate Competitive Bidding for Leases.*

42. Although the Outer Continental Shelf Lands Act emphasized the need for competitive bidding to assure fair value and the equitable distribution of resources,

competition for leases has been inhibited by the almost exclusive use of the cash-bonus, low-royalty bidding system.

43. The cash-bonus, low-royalty system, unlike other bidding systems, requires the expenditure of large cash amounts before any resources have been recovered and when risks are very high. At the time leases are awarded, uncertainty about discovery prospects, exploration and development costs, and future production and prices is great. Smaller companies cannot afford to spread risks over a large number of leases, as large, integrated oil companies can do. Nor can they obtain bank financing in view of the uncertainty about the resources to be recovered. See paragraph 37, *supra.* Thus, because of the cash-bonus, low-royalty system, large, integrated companies face much less significant competition from independent producers.

44. The cash-bonus, low-royalty system affects competition in offshore leases by encouraging joint bidding. The high capital requirements and the high degree of risk may promote bidding combinations among companies that otherwise might bid in competition with each other.

45. The Secretary of the Interior has further limited competition in the bidding process by offering large numbers of tracts for sale on a single day. Because of this system, companies must limit their overall cash-bonus bids to avoid winning more tracts than they can afford. Companies may decide not to bid on particular tracts that they would bid on at a later time if they knew the results of their bidding on other tracts. Companies may also submit lower bids for particular tracts, hoping and expecting that the spread of competition will result in few or no other bids. These bidding practices increase the likelihood that the Government will not receive a fair return for its resources from a cash-bonus, low-royalty system.

46. During the leasing period from 1954 to 1972, there was an average of approximately 3.5 bidders per

tract actually bid upon and only 1.71 bidders per tract offered. One-half of the tracts offered received no bids.

47. During the leasing period from 1954 to 1972, the Federal Government leased numerous tracts for which there was no competition, thus awarding the tract to the only bidder. Of the thirty lease sales held during that time, in nineteen of them the Government awarded thirty percent or more of the tracts to a single bidder. In eighteen of the thirty lease sales, more than one-half of the tracts leased received only one or two bids. Because of this low figure, potential lessees were aware that the number of competitors for any given tract would likely be small and that, in many cases, there might be no other competing bids.

48. The post-1972 market changes discussed in paragraph 30, *supra*, greatly increased the anti-competitive bias inherent in the cash-bonus, low-royalty leasing system. The leasing of increased acreage per year has placed even greater capital pressures on bidders since more cash bonuses have to be paid to assure proportional access to sources of supply. Competitors are also required to expend their available cash over a greater number of leases, thereby reducing the percentage of leases for which they can aggressively compete.

49. The absolute amount of bonuses paid under the cash-bonus, low-royalty bidding system increased sharply beginning in 1972. The size of these front-end payments further increased the difficulty of entry for smaller, independent companies. Whereas the average of bonus bids for all previous leasing years had been slightly under $320,000,000, bonus payments in 1972 totalled $2,251,347,556. The bonus payments rose to $3,082,462,611 in 1973 and to $5,022,860,815 in 1974. Bonus payments were $1.1 billion in 1975, $2.2 billion in 1976 and $1.6 billion in 1977.

50. As a result of these pressures, competition for tracts from 1973 to 1978 was even further reduced. The average number of bids per tract bid upon at lease sales

during that period ranged from 1.16 to 5.97, with an average per lease sale of 2.77, and the average bids per tract offered declined to 1.26. In thirteen of the eighteen lease sales, the average number of bidders per tract averaged 3 or less. A high number of tracts was leased to a single bidder or to one of two bidders. Fifty-seven percent of the tracts offered received no bids at all.

51. The number of joint ventures under the cash-bonus, low-royalty system also has had a negative impact on bidding competition for offshore leases. During the 1954-1972 leasing period, joint ventures accounted for a significant percentage of the dollar amount of winning bids. In nine of the fourteen years in which lease sales were held, over forty percent of the dollar amount of the winning bids was submitted by joint ventures. In the period from 1968 through 1973, joint ventures accounted for approximately seventy-five percent of the value of the winning bids. Over sixty-one percent of the winning bids were by joint ventures that included one or more of the twenty largest companies, and twenty-seven percent were accounted for by joint ventures that included only the twenty largest oil companies. Joint ventures not only restrict competition in the leasing market, but also increasingly concentrate the ownership of, and control over, oil and gas resources from the Outer Continental Shelf. See paragraphs 55-59, *infra*.

52. The tendency toward higher cash bonuses increased the number of joint ventures after 1972. Whereas joint ventures before 1972 had typically accounted for somewhere between 40 and sixty percent of the dollar amount of the winning bids, an already high proportion, they accounted for 75 to ninety-two percent of the dollar amount of winning bids in 1972 through 1974.

53. Joint ventures also encourage potential competitors to share information about prospects and plans for development of the Outer Continental Shelf. This exchange of information has tended to reduce competition in offshore leasing among the companies because of their shared interests and disclosures.

54. Inadequate bidding has a direct effect on the success of a particular bidding system. Indeed, a 1976 Interior report, discussing figures from offshore lease sales, noted the high positive correlation between the number of bidders on a tract and the amount of the high bid. *Joint Bidding for Federal Onshore Oil and Gas Lands, and Coal and Oil Shale Lands at 16-17* (June 1976). When the Federal Government has leased tracts with inadequate competition, therefore, the likelihood of receiving fair market value has been severely diminished.

C. *The Cash-Bonus, Low-Royalty System Has Concentrated Control Over Offshore Oil and Gas Resources in the Largest Oil and Gas Companies.*

55. The cash-bonus, low-royalty system leads to concentration of outer Continental Shelf resources under the control of larger, integrated oil companies. The cash barriers to active participation in leasing and the magnitude of risks placed on the lessees inhibit the acquisition of leases by smaller, independent operators.

56. The cash-bonus, low-royalty system has resulted in a large percentage of lease acquisitions by a small number of companies. During the leasing period from 1954 through 1972, the four largest winning bidders in a particular year frequently accounted for more than sixty percent of the total dollar amount of winning bids. The eight largest winning bidders in a particular year typically accounted for three-quarters or more of the dollar value of the winning bids. In any particular year, therefore, the resources leased by the Federal Government were likely to be distributed among relatively few companies.

57. During the period from 1954 through 1972, with the exception of only four years, the eight largest producers of crude oil in the United States accounted for over fifty percent of the dollar value of the winning bids. The twenty largest producers usually accounted

for over eighty percent of the dollar amount of the winning bids. During the period from 1968-72, for example, the eight major companies (Exxon, Texaco, Gulf, Shell, Standard Oil of California, Standard Oil of Indiana, Atlantic Richfield, and Mobil) accounted for 77%, 94%, 60%, 96% and 42% of the winning bids; the twenty major companies (the eight majors plus Union Oil, Getty Oil, Sun Oil, Continental Oil, Marathon, Phillips Petroleum, Cities Service, Amerada Hess, Tenneco, Champlin (Union Pacific), Standard Oil of Ohio, and Ashland Oil) accounted for 94%, 100%, 82%, 100% and 77%. These figures indicate not only that the control of offshore resources is concentrated in relatively few companies but also that those companies are generally among the largest oil companies in the United States.

58. Concentration of the now more valuable offshore resources has continued since 1972. In lease years from 1973 through 1978 the eight majors obtained from 53 to sixty percent of the tracts leased, while the twenty majors acquired 67 to eighty-seven percent.

59. The federal leasing program from 1954 through 1978 was not successful in increasing competition for federal oil and gas leases. To the contrary, the use of the cash-bonus, low-royalty bidding system encouraged concentration, rather than distribution, of federal oil and gas resources.

D. *The Cash-Bonus, Low-Royalty System Has Not Expedited Development of Offshore Resources.*

60. Although the 1953 Outer Continental Shelf Lands Act sought to expedite exploration and development of the Outer Continental Shelf, the cash-bonus, low-royalty system adopted by the Secretary and used in nearly all lease sales conducted under the Act has not served that need effectively. By its nature, that system at the outset absorbs large amounts of cash that would otherwise be available for rapid exploration and development. Moreover, cash-bonus, low-royalty leases have traditionally

been acquired by the largest oil companies, which have counterincentives to development of domestic oil production and which have not rapidly or extensively developed their leases for energy production.

61. Cash-bonus, low-royalty leases have traditionally been acquired chiefly by major oil companies, many of which derive a substantial share of their assets and revenues from overseas production. From 1969 to 1977 foreign holdings of the twenty majors and seven other companies (the "Chase Group") supplied these twenty-seven companes with 200-400% more crude oil than their United States holdings. In that period, the companies reduced their domestic production while increasing their acquisitions of crude oil from overseas production.

Source of Crude Oil (in Thousand Barrels Per Day)

	United States	Rest of the World
1969	6,417	19,826
1970	6,814	23,260
1971	6,747	24,900
1972	6,730	26,590
1973	6,570	28,653
1974	6,173	27,893
1975	5,891	22,944
1976	5,587	24,167
1977	5,668	24,742

62. The heavy involvement of the major oil companies in foreign production has provided them with strong counterincentives to rapid exploitation of their domestic oil resources. Although domestic profits are high, even the oil industry's own calculations show that profits on their foreign operations are higher.

a. Industry indicators show that the twenty-seven members of the Chase Group received greater and more immediate benefits from the increasing world oil price on their non-United States properties than on domestic investments. Indeed, their indicated rate of return on

their foreign properties was almost 100% greater than their domestic rate of return in some years.

Rates of Return On Average Invested Capital

	United States	Rest of the World
1969	10.9	11.2
1970	9.9	11.10
1971	9.3	12.5
1972	9.3	9.9
1973	10.5	20.9
1974	14.6	23.9

b. The twenty major United States oil companies also have been receiving significant special incentives from United States tax law and policy for their foreign operations, most notably the Foreign Investment Tax Credit. The Foreign Investment Tax Credit was designed to encourage American corporations, including oil corporations, to pay their tax obligations incurred in foreign countries as a result of their operations in those countries by allowing any payments so made to be credited against any domestic taxes owed. In practice, however, it has operated to provide an extra benefit to oil operations abroad because it allows multinational companies to receive a tax credit for payments that would otherwise be considered as royalties or other ordinary business costs of acquiring oil. The sheltering effect of the foreign tax credit, and other tax concessions, has been so great that the multinational oil companies pay the lowest average rate of income tax of any major industrial group. In 1972, United States income taxes paid by major domestic oil companies amounted to the following percentages of their foreign and domestic income: Exxon, 6.5%; Texaco, 1.7%; Mobil, 1.3%; Gulf, 1.2%; and Standard Oil of California, 2.1%.

c. The incentive and opportunity for the majors to stress their foreign production was further enhanced

upon termination of the Mandatory Oil Import Program in 1973. Under the Mandatory Oil Import Program in effect from 1959 to 1973, foreign oil imports had been restricted in the eastern United States to 12.2% of domestic production and in the West to the difference between demand and domestic supply. The new program raised the ceiling considerably, to 2 million barrels a day, in the eastern United States and in California, to 670,000 barrels a day, most of which could be acquired by the major companies under favorable production or supply contracts with foreign producers.

d. Another significant incentive to the major oil companies for preferring their foreign oil production has been the world political situation. In 1973 and 1974 several countries, including Libya, Iran, Kuwait, and Iraq, nationalized their oil production. The OPEC nations began to play an assertive and aggressive role in world oil policy and the companies' ability to continue their domination of their foreign operations seemed less sure, militating toward rapid exploitation of their remaining foreign resources and contracts. In contrast, domestic oil prices lagged behind world prices, and the companies had incentives to exploit domestic resources more gradually to stimulate, and then realize benefits from, future price increases.

63. The foregoing counterincentives have resulted in nonexploitation of federal Outer Continental Shelf leases held by major companies with foreign oil resources.

a. On the Outer Continental Shelf, oil production has decreased from a 1971 high of 418.5 million barrels to 292 million barrels in 1978. This decline in production on the Outer Continental Shelf has come despite very significantly increased acreage under lease. Indeed, the number of barrels of oil produced in 1977, when almost 15 million acres were under lease, was less than in 1971 when only 7.25 million acres had been leased on the Outer Continental Shelf.

b. Despite the great acreage increases, there has been no actual or proportionate increase in the indicia of de-

velopment: *e.g.*, exploration permits, number of crews engaged in seismic exploration, line miles of seismic exploration, new wells. Only seventy-two more permits for OCS exploration were issued in 1977 than were issued in 1974 (1974: 400; 1977: 472). There were, on a monthly average, fewer crews engaged in seismic exploration in 1978 than in 1974. Indeed, the monthly average has decreased each year since 1974. Line miles of seismic exploration have likewise declined on the Outer Continental Shelf, from 28,482 in 1974 to 10,390 in 1977. The number of wells completed in any year since 1971 has yet to reach the 1970 high of 605 wells completed.

c. Specific lease analysis also indicates that leases are not being promptly developed and brought into production. Although diligent lessees can be producing significant quantities of hydrocarbons within one year, from 1967-1974 only two percent of producing leases (and 0.5% of all leases) commenced production within one year of lease acquisition. Indeed, less than one-half of the producing leases (and only 10.9% of all leases) were brought on production within four years. See Appendix D. The delay in production averaged more than four years on leases already producing, and that figure will necessarily rise as nonproducing leases already beyond the four-year period begin production.

d. A recent report by the Comptroller General further shows that development of Outer Continental Shelf resources has been laggardly. *Policy Needed to Guide Natural Gas Regulation on Federal Lands* (June 15, 1979). Studying tracts leased in two lease sales in 1970 and 1972 to determine whether lessees had promptly developed natural gas resources, the Report found that "[n]early half of the leases in the December 1970 sale on which economically producible quantities of natural gas had been found were not producing at the end of the primary [five-year] term. A number of the December 1972 leases were not explored until later in the primary

[five-year] term, and some leases [sixteen percent] were never drilled." *Id.* at iii. Moreover, twenty-four percent of the 1970 leases and sixteen percent of the 1972 leases were classified in 1977 as "producible shut-ins": leases having oil or natural gas in producible quantities that are not being produced. Without forceful oversight by the Department of the Interior, lessees may keep these resources in the ground to await price rises rather than develop them expeditiously to relieve conditions of serious shortage.

64. Development and production can proceed more expeditiously in a more competitive environment. Smaller, independent companies, with much less cash flow and in greater need of quick returns on investment, have an incentive to exploit their Outer Continental Shelf leases more rapidly. Such companies typically do not have the capital to accumulate an inventory of unproduced oil and gas but must bring their resources to the market in a prompt manner.

65. The cash-bonus, low-royalty method of leasing Outer Continental Shelf lands has not achieved the goal of the 1953 OCS Act to promote the prompt development of domestic oil and gas resources.

E. *The Cash-Bonus, Low Royalty System Has Not Provided a Fair Return for Public Resources.*

66. Although the OCS Act has always contemplated that the Secretary should sell oil and gas resources only for a fair return, the inherent shortcomings of the cash-bonus, low-royalty bidding system have prevented the Government from obtaining its legitimate share of the "economic rent" from federal offshore leases. The "economic rent" from a lease is that amount of profit that exceeds the normal rate of profit necessary to attract investment to the enterprise. If lessees are receiving the bulk of the economic rent from offshore activities, the Federal Government is not receiving a fair return for its resources and is subsidizing undeserved or windfall profits for the lessees.

67. The offshore leases granted from 1954 through 1970 by cash-bonus bidding and 16⅔% royalty agreements surrendered the bulk of the economic rent from federal property to the oil companies while they yielded the Government an effective share of total production value far lower than experience shows companies willing to yield under a variety of royalty-bidding, sliding-scale royalty, profit-sharing and other offshore leasing arrangements. The overall return to the companies on the 1954-1970 leases is sixty-six percent of the revenues derived from oil and gas production. (See Appendix D.) The Government will thus receive only thirty-four percent of that value through cash bonuses and royalty payments (*id.*). These percentages are derived by adding to the cash bonuses paid from 1954 through 1970 the royalties payable to the Government during the life of all the productive leases awarded in that period (*id.*). While the cash bonuses in strict dollar terms add only about five percent to the 16⅔% royalty receipts on the leases, the aggregate yield to the Treasury increases to 27.8% after correction for the extra inflation value of cash bonuses received when the dollar was more valuable; it reaches a total federal share of thirty-four percent after additional correction for the investment value of the up-front cash bonus payment (*id.*). Thus, even after fullest allowances for the extra value of cash payments received in advance, the leasing experience shows that the Government will receive only one-third of the revenue from its own resources leased between 1954 and 1970 under the cash-bonus, low-royalty arrangement.

68. During the period from 1970 through 1978, the cash-bonus, low-royalty bidding system will likely show even less fair value to the United States. Whereas that system granted a one-third share to the United States in leases through 1970, the largest portion of oil and gas production under those leases was realized before the price of oil and gas increased dramatically in the mid-1970's. Because leases since 1970 will realize their pro-

duction under vastly increased prices, the effective return to the United States will be even lower. This effect is demonstrated by examination of the offshore leases granted in 1970: since their production is being yielded mostly under far higher prices, the calculation of the government's share of total production value, including both the cash bonuses and the royalties, drops significantly to thirty percent. See Appendix D, *infra.*

69. The experience of the United States under the cash-bonus, low-royalty system compares unfavorably with results from the use of other available bidding systems. Other governments and the United States itself have leased mineral lands under procedures that retain a higher proportion of revenues from the leases. Similar revenue gains could have been made by the Federal Government if it had not relied almost exclusively on cash-bonus, low-royalty bidding procedures.

70. As discussed in paragraphs 18-19, *supra*, it was apparent before passage of the Outer Continental Shelf Lands Act of 1953 that state governments had been able to obtain higher royalty payments from the oil companies than the Federal Government had received on its onshore leases. One Senator, noting the difference, said that

> "[t]he fact that Federal leases are so much cheaper than State leases gave rise to the entire submerged lands controversy." "Submerged Lands": Hearings on S.J.Res. 13 *et. al.* Before the Senate Committee on Interior and Insular Affairs, 83rd Cong., 1st Sess. 210 (1953).

The 1953 Act, by granting to the Secretary the authority to use differing bidding systems, did not intend to limit the Secretary to obtaining low-royalty payments, but contemplated that he obtain for the public at least the same return received by other lessors.

71. On March 12, 1947, the City of Long Beach, California, entered into a drilling and operating contract, pursuant to a public bidding procedure, under which the

contractor was to receive 5.9% of the proceeds of the sale of oil and gas produced thereunder, and the City was to receive 94.1% of the proceeds. Costs for drilling, maintenance and operations were to be paid from the share retained by the city, but in any event the City of Long Beach was guaranteed a net minimum of 60.1% from the lease.

The March 1947 lease was only one of several offshore leases granted by the City of Long Beach. According to the Long Beach City attorney,

> "[t]o November 30, 1947, the actual net cash received by the City under one of said contracts exceeded fifty-four percent, and the smallest amount under any said contract exceeded forty-one percent of all revenue derived from the sale of oil produced thereunder, plus millions of dollars' worth of oilfield equipment, in addition to 100% of the resulting dry gas—excepting the amount required in the developing operations—sold at additional profit to the City. The average net cash received by the City to November 30, 1947, under said six contracts, was forty-six percent of all revenue derived from the sale of oil produced thereunder." "Title to Submerged Lands Beneath Tidal and Navigable Waters": Hearings on S. 1988 and Similar House Bills Before the Senate Committee on the Judiciary and the House Committee on the Judiciary, 80th Cong., 2d Sess. 785 (1948).

72. The City of Long Beach also operates Tract 1 of the Long Beach unit as Trustee for the State of California. The Long Beach unit is part of the Wilmington Oil Field, the second largest producing field in the United States. Long Beach leased Tract 1 in 1965 on a net-profits bidding basis, under which the lease was awarded to the bidder agreeing to pay Long Beach the highest percentage of profits from the lease. The high bid called for Long Beach to receive approximately 96.4% of the net profits from the lease.

The City of Long Beach did not place upon bidders the significant risk of high capital outlays and drilling uncertainty. Before the lease sale was held, the City drilled core holes on the field to determine the extent and quality of the available oil and gas. This information was made available to bidders prior to the sale.

Over the ten years ending on April 1, 1975, the City of Long Beach received net profits of $466.2 million. This figure represents approximately forty-eight percent of total gross revenues ($976.2 million). Moreover, the State Lands Commission and The City of Long Beach have charged in litigation that this figure would have been greater if it had not been depressed by illegal conduct by the lessees. *City of Long Beach* v. *Standard Oil Company of California*, No. 75-2232 (C.D. Cal.).

73. Further demonstration of the absence of fair return from cash-bonus, low-royalty leasing is found in the Department of the Interior's own experience with leasing by other methods. The Secretary departed from the cash-bonus, low-royalty bidding procedure for ten tracts in OCS Sale No. 36 conducted in October 1974. Those tracts, selected at random on each of ten separate structures, were offered for competitive bidding of the royalty rates with a fixed bonus of $25 an acre.

The companies submitted high royalty bids on eight of the tracts offered. (The other two tracts received no bids at all.) In contrast to the normal 16⅔% royalty, the successful bidders in Lease Sale No. 36 offered the following royalties: 51.8%, 56.8%, 57.8%, 60.3%, 70.8%, 70.8%, 73.5% and 82.2%. Furthermore, competition for the tracts was high. Although the tracts offered on a cash-bonus, low-royalty basis at the same sale received an average of 2.2 bids per tract, the tracts offered on a royalty-bid basis received an average of 7.1 bids per tract. The royalty sales also attracted new bidders to the lease sale market, broadening the competitive base.

74. The Secretary waited three years before again resorting to royalty bidding, in the Cook Inlet Sale held

in October 1977. For this sale, royalty bids ranged as high as sixty-three percent of revenues from the leased tracts. Eight of the thirty tracts offered on a royalty bid basis were leased for royalties in excess of fifty percent, and seventeen tracts commanded royalties over forty percent. Use of the royalty bidding system also stimulated participation by companies that have not regularly bid under a cash-bonus, low-royalty bidding system.

75. The Secretary has also been able to obtain a higher percentage of royalties, apparently without a decrease in cash bonuses, by use of a sliding-scale royalty. Since early 1978, for example, the Secretary has conducted five lease sales using cash-bonus bidding and a sliding-scale royalty system that provides for royalties beginning at 16⅔% and increasing to as much as sixty-five percent as the value of production increases. An April 17, 1978 Department of the Interior Study of one such sale (No. 43) concluded that there was "no significant difference" in "the relative amounts bid between fixed royalty or sliding scale tracts," despite the far higher royalties on the sliding scale tracts. Indeed, the two most successful of the five sales actually showed more bids and also higher bonuses in relation to the Government's tract evaluations on the sliding scale acreage than on the 16⅔% acreage in the same sales.

76. When oil companies lease their own lands for exploration by independent producers, they seek to retain a greater interest in the ultimate value of production than the Federal Government requires them to surrender as lessees under the cash-bonus, low-royalty system.

77. Foreign governments also have pursued more advantageous leasing programs. The leasing of tracts in the United Kingdom sector of the North Sea for oil and gas exploration began in 1964. The British Government has used a two-stage leasing system, separating exploration activities from production. Initially, payments to the Government for a production license included a 12½% royalty, plus a fixed payment of 6,250 pounds per average

100 square mile block for the initial six-year period. Additional, and higher, rental payments were required for subsequent years. In later leases, the British Government raised the amount of the initial payment and annual rent.

Unlike the United States, the British Government reacted to the Arab oil embargo and the subsequent increase in oil prices by adopting a different leasing system. A White Paper issued in July 1974 noted that

> "[d]uring the past year the world price of oil has more than quadrupled: the average f.o.b. price of Middle Eastern oil, a year ago about $2.00 per barrel, is now $9.00-$10.00. If prices remain high and with the high production now expected, profits on our offshore oil will be enormous. . . . Under present arrangements, tax and royalty will take a relatively small portion of profits in the early years, and would never take much more than half. The result is that North Sea licensees would reap enormous and uncovenanted profits on their investment."

The Government sought to amend its system "[t]o secure a fairer share of the profits for the nation and to maximise the gain to the balance of the payments."

The new system of development licenses implemented by the British Government generally required a royalty of 12½% plus a petroleum revenue tax of forty-five percent plus a fifty-two percent corporation tax on net revenue. Including the profits of the British National Oil Company, a fifty-one percent participant in all North Sea leases, it has been estimated that the Government's share of profits is approximately seventy percent. Nevertheless, the British Government is continuing to experiment with alternative systems to assure maximum development and return.

78. The Government of Norway also has used a two-stage system, separating exploration and production. Production licenses have been issued for blocks of ap-

proximately 129,000 acres each, under a license valid for six years. At the end of the six-year period, the Government has required licensees to surrender fifty percent of the licensed area, except that they need not surrender any area where petrolum discoveries have been made. The licensees have been permitted to hold the retained area for an additional thirty years.

The Government of Norway has received a high percentage of the revenues from its leases. Cumulative charges have included (1) a one-time fee for the first six-year concession period, (2) an area fee beginning with the seventh year, (3) a royalty of from 8 to sixteen percent of the value of production, (4) a production bonus of approximately $5,000,000 within thirty days of the day that production reaches 250,000 barrels a day and approximately $10,000,000 within thirty days of the day that production attains 400,000 barrels per day, and (5) income taxes of 50.8% of corporate profits. After the Arab oil embargo and the swift rise of prices, the Norwegian Government acted to impose a special windfall profits tax of forty percent (subsequently lowered to twenty-five percent). It has been estimated that the Government could receive as much as seventy-five percent of the revenue from its leases, with an average somewhere between 57 and sixty-six percent.

79. Most other foreign countries also have separated the exploration and development phases and retained for themselves a far higher participation in oil and gas revenues than is enjoyed by the United States. Indonesia, for example, has received a sixty-five percent share of production revenues from its oil, once the contractor has recovered expenses. Likewise, it has been estimated that Burma has received a seventy percent share, after accounting for costs, without relinquishing legal title to its oil resources. Greenland has received a 12½% royalty and imposed a tax of fifty-five percent of net production profits. It also has reserved the right to insist upon a fifty percent participation and to require partial surrender of concession areas.

80. The figures set forth in the preceding paragraphs indicate that companies are willing to pay far higher royalties than have been required in order to obtain leases in the Outer Continental Shelf. Use of a royalty bidding system or a net profits bidding system enables the Government to capture a higher share of the economic rent, to stimulate competition for leases, to increase the prospects for distributing resources among a larger number of producers, and to prevent nonexploitation of resources by large, multinational companies.

81. The payment of cash bonus at the inception of a lease has proved an insufficient method of recapturing the difference between a 16⅔% royalty and the higher royalties (or share of net profits) that may be obtained through use of other bidding systems.

F. *The Cash-Bonus, Low-Royalty Bidding System By Its Very Nature Cannot Assure Receipt of Fair Value.*

82. The failure of the cash-bonus, low-royalty system to assure or achieve receipt of fair value has not resulted from a unique set of circumstances but is an inevitable consequence of the system itself. The United States is not a full partner in the offshore drilling experience, with a commensurate share of the risks and benefits. Rather, it sells a resource of unknown value by auction and hopes that a substantial part of its ultimate recovery will be received in advance by the cash bonuses. The Government in effect gambles that the initial bonus payments, for both producing and nonproducing lands, will capture a fair share of revenues from production on successful tracts. This gambling process cannot assure the receipt of fair value for the public.

83. Although the inherent weaknesses of the cash-bonus, low-royalty system can be lessened by acquiring reliable information about the value of the resources prior to sale, that has not occurred. See Paragraphs 34-41, *supra*. At the time of bidding on a cash-bonus, low-

royalty lease, therefore, a potential lessee must discount in his cash-bonus bid for the risks and uncertainties of discovery, exploration and development costs, and future prices and demand. The Government must make similar speculations in deciding whether to accept or reject the offered bids. Because the uncertainties are great, and the variables so numerous, it is impossible to assure that cash bonuses will offset the low royalties that the United States can receive under the 16⅔% royalty rate.

84. In addition, the cash-bonus, low-royalty system inevitably reduces the level of bidding competition that might compensate for lack of adequate information. Smaller, independent producers are inescapably excluded from the bidding process by the high up-front capital requirements and the unacceptable risks that the system imposes. Fair value cannot be assured in the absence of sufficient information or vigorous competition for tracts.

85. The cash-bonus, low-royalty system, because of the risks that it imposes on lessees, not only reduces the number of bidders but necessarily tends to depress the level of bids that it does attract. *See Department of Energy, Report to Congress on Various Options Used in FY-78 Lease Sales on the Outer Continental Shelf*, at 13 (1974). When potential lessees are risk-averse, they will underbid for leases and reduce the overall return to the Federal Government. Other systems of awarding leases, like royalty bidding systems or net-profit bidding systems, reduce the impact of initial uncertainties and consequently allow greater participation for the public in the revenues later generated from its own resources.

86. It is true that, as a result of the cash-bonus, low-royalty system, and the lack of reliable information, the Government in some instances has received significant payments for the right to develop oil and gas resources that prove not to exist. Because neither the lessees nor the Government has sufficient information at the time of leasing, a certain percentage of exploratory wells drilled

by lessees may turn out to be dry holes. However, there can be no assurance that the payments for dry holes will offset the low-royalty return to the Government on successful drilling. Moreover, the high expenditures for cash bonuses reduce the funds available for development of more promising tracts.

87. The innate advantages of a leasing system that shares risks and profits over a cash-bonus, low-royalty system were noted in a March 25, 1977 memorandum from Economist Marshall Rose of the Office of Policy Analysis, Department of the Interior, to the Acting Deputy Assistant Secretary—Program Development and Budget, which stated:

> "The profit-sharing system has the advantage of enhancing competition and reducing private risks, without inducing the inefficiencies in exploration, development, and production decisions that are caused by royalty systems. As a result, compared to a royalty system with the royalty rate fixed at any desired level, we can find a profit-sharing system that generates more government receipts and simultaneously encourages higher levels of production."

88. The cash-bonus, low-royalty system inherently does not, and cannot, fulfill the objectives of the Outer Continental Shelf Lands Act.

Section IV: Recognition of the Failure of Cash-Bonus, Low-Royalty Leasing and the Movement for Reform of the Federal Leasing Program.

8. Beginning in the early 1970's there developed substantial recognition by government agencies and defendants themselves that the cash-bonus, low-royalty leasing system was a failure.

A. *Federal Recognition.*

90. In September 1974, the National Science Foundation published a report entitled "An Economic Analysis

of Alternative Outer Continental Shelf Petroleum Policies." That report noted

> "the limited development of leasing policy over the past two decades is in sharp contrast with the dramatic changes in economic conditions and social objectives. Specifically past leasing strategies have not been changed in response to increased petroleum price and development cost uncertainty or to the increased geologic uncertainty associated with greater reliance on and acceleration of leasing on the OCS. . . . Moreover, the recent single 'energy crisis' has substantially renewed concern with issues of market power in the petroleum industry and with the adequacy and optimal allocation over time of resources." *Id.* at 6.

The Report also stated that "[d]ue to risk, private enterprise tends to underinvest in exploration and development," *id.* at 6, and suggested consideration of profit-sharing bidding systems, which "reduce[] all three categories of risk—geologic, development cost, and petroleum price." *Id.* at 7. The Report pointed out that, in addition

> "[r]isk, and thereby many problems of OCS leasing, can be reduced through the collection and utilization of more information on the petroleum production potential of the OCS." *Id.* at 8.

91. A March 19, 1975 report by the Comptroller General, entitled "Outlook for Federal Goals to Accelerate Leasing of Oil and Gas Resources On the Outer Continental Shelf," observed that "[u]ntil 1971 there was little orderly planned development of the Shelf. The Shelf oil and gas leasing program was influenced heavily by industry interest and the desire to generate revenues for the Treasury." *Id.* at i. The Report went on to criticize the accelerated leasing program adopted by the Secretary in 1973, stating:

> "The lower quality and/or lack of evaluation made necessary by inadequate staffing will mean increased reliance on bid-competition as the only means to insure that fair market value is received for leased resources. The Government's tract selection and valuation practices are inadequate even at much slower leasing rates." *Id.* at iv.

Regarding the effective level of competition, the Report warned that

> "[t]he eight largest petroleum companies are expected to secure a substantial share of the acreage to be leased in the initial offers of frontier acreage of the Atlantic and Alaska. The smaller petroleum companies are not expected to be major competitors for the frontier Shelf areas because of high risks and costs associated with their exploration and development." *Id.* at v.

92. A second report by the Comptroller General entitled "Outer Continental Shelf Oil and Gas Development—Improvements Needed In Determining Where to Lease and At What Dollar Value," provided additional criticism of the Federal Leasing Program. That report concluded that

> "the Federal Government's Shelf evaluation programs [1] are hindered by inadequate data and analysis, [2] do not reasonably insure that a fair market value return is received on lease offers of Shelf oil and gas resources, and [3] are being jeopardized by an accelerated leasing pace." *Id.* at ii.

The Report found that

> "[n]either Government nor industry has the geological data essential for adequately determining if geological characteristics necessary for petroleum accumulation exist in the wildcat tracts, or the frontier Shelf areas. . . . Under present practice exploratory drilling generally is not done until after leasing.

> Consequently, the Government and industry have to rely on geological inference and speculation as to whether petroleum actually exists." *Id.* at 7.

The Report also pointed out that undervaluation of resources by the Government results in the payment of less than a fair return by industry, stating:

> "[T]his is a critical point since these are the public's resources and it is the Government's job to not give them to industry for less than they are worth." *Id.* at 17.

The Report concluded that

> "[a]lthough one should recognize that the numerous factors which constitute the valuation process are difficult, if not impossible, to quantify with certainty, the fact is that the Government is not doing all that it can to reasonably insure fair return on the disposition of oil and gas Shelf resources." *Id.* at 33.

93. In March 1977, the Comptroller General issued another report, entitled "Outer Continental Shelf Sale No. 35—Problems Selecting and Evaluating Land to Lease." This report found again that the Secretary had inadequate information to assure that the Government would receive a fair value for the public's resources:

> "The Department [of the Interior] selected tracts for lease after reviewing only minimal and inadequate data and before assessing the true resource development potential of the land." *Id.* at ii.

Because the data were so inadequate, "estimates of tract values were not reliable and could not reasonably assure that the public received a fair market value return from the leases." *Ibid.* The Report was also critical of the level of competition:

> "The results of this sale also indicated a lack of competition; of the 231 tracts offered only 70 received bids. The majority of the tracts bid on (70 percent) received only one or two bids." *Ibid.*

94. In June 1977, the Comptroller General issued a similar report with regard to Lease Sale No. 40. That report, entitled "Outer Continental Shelf Sale 40—Inadequate Data Used to Select and Evaluate Lands to Lease," again concluded that "Interior selected tracts for lease after reviewing limited and insufficient data and before assessing the true resource development potential of the land." *Id.* at i. Indeed, the Report found that "Interior had less overall information to use in evaluating Sale 40 then in did for Sale 35." *Id.* at ii.

95. In June 1978, the Comptroller General issued another report entitled "Lower Cook Inlet—Another example of More Data Needed for Appraising Outer Continental Shelf Oil and Gas Resources." This report stated:

> "The Department of the Interior's policy of leasing Outer Continental Shelf lands that have not been properly evaluated (because of limited data) encourages industry to tie up capital in lands with minimum or no resource potential or buy lands for less than fair market value." *Id.* at i.

The Comptroller General specifically found that "sale evaluations [for the Cook Inlet sale] were made with limited and poor quality data and therefore were unreliable." *Id.* at ii. The Report also stated:

> "A competitive leasing program is based on the premise that competition will provide a fair market return. In its two previous reviews, GAO found that more than half of the tracts bid on got only one or two bids. For this sale about sixty percent of the tracts receiving bids got only one or two bids each. In cases such as this when competition is limited or does not exist, it becomes increasingly important for accepting or rejecting industry bids." *Id.* at ii.

96. In April 1978, the Federal Trade Commission advised the Department of the Interior of its concern about

competitive effects that might result from Lease Sale No. 43. "Comments of the Bureau of Competition of the Federal Trade Commission to the Department of the Interior on OCS Sale 43 (Southeast Georgia Embayment." The Commission asserted that

> "potential entrants into Atlantic Coast OCS crude oil production are being deterred by existing industry structure and that control of crude reserves will be further concentrated in the hands of the larger international companies and other majors thus adversely affecting price and output as well as the future downstream structure of the industry." *Id.* at 6.

The Commission also noted "the high concentration of refinining capacity and the tendency of the largest refiners to purchase the majority of leases for OCS tracts and to foreseeably control any pipelines serving those tracts." *Id.* at 7. The Commission said that

> "in order to minimize the disincentives and other concerns currently faced by small and independent producers in entering OCS bidding and production, we recommend that the Department of the Interior further experiment with alternative lease payment systems (sliding scale royalty, etc.) and provide as much advance notice as possible to such potential entrants regarding the tracts as to which the experimental approach will be applied." *Id.* at 23.

97. As set forth more fully elsewhere, see paragraphs 87, 99, 103-104, the cash-bonus, low-royalty leasing system was criticized not only by other federal bodies but also by Secretaries of the Interior and Interior staff members, who expressed doubt that the cash-bonus, low-royalty system has secured fair value, particularly in a time of rising prices, and admitted that a net profits system would provide more government receipts and greater incentives to exploration.

B. *Congressional Recognition.*

98. In October 1974, Congressman Dingell of Michigan warned the Senate Judiciary Subcommittee on Administrative Practice and Procedure that the Department of the Interior was not capable of handling the proposed expanded leasing program. Mr. Dingell said that an investigation conducted by the Small Business Subcommittee on the Activities of Regulatory Agencies showed that the Department was unable to assure "that the Government received fair value for the (OCS) tracts it leases, that the Government knows the amount of the reserves underlying the leases, or that the Government is capable of administering and supervising operations on leases once they are let."

99. In 1975, the Senate Committee on Interior and Insular Affairs and the Senate Commerce Committee held joint hearings to consider amendments to the Outer Continental Shelf Lands Act. At those hearings, there was strong criticism of the federal leasing program under the 1953 Act. Senator Bentsen stated flatly that

> "[w]hile the present system results in a large initial cash payment, the American citizen receives very little from what may be an extremely valuable oil and gas discovery on his lands. If the lease proves to be undervalued by the companies who bid on the tract, the Government has no way to share in what may be a bonanza. This becomes far more important today then it has been in the past due to higher oil prices and the President's desire to greatly increase the schedule of lease sales." "Outer Continental Shelf Lands Act Amendments. . . .": Hearings on S.Res. 45 and S.Res. 222 Before the Senate Committee on Interior and Insular Affairs and the Senate Committee on Commerce, 94th Cong., 1st Sess. 698 (1975).

Senator Bentsen also noted that

> "[o]ne of the worst features of the present system's reliance on high initial cash payments is the advantage it gives the large companies over the smaller ones—the major over the independent." *Ibid.*

A report prepared by Thomas B. Lewis for Senator Mathias stated that

> "[p]resent leasing procedures require the payment of huge cash bonuses which are prohibitive expenses to small, independent operators and effectively limit participation and competition in the OCS arena. Present procedures also allow the leasing of Federal lands which are as yet unexplored; as a result, the United States has no effective way of assuring the public of a fair return from lease sales . . . ." *Id.* at 719.

Critical views were also offered by Barbara Heller, then of the Environmental Policy Center and now Deputy Under Secretary, United States Geological Survey, Department of the Interior, who told the Committees:

> "There is no excuse . . . for the irresponsible way in which the Interior Department is proceeding with the federal leasing program. No good business man would run his business the way the Interior Department deals with our public resources. No good business man would put a product on the market without knowing what he is selling. The Interior Department does that with our public resources. No good business man would sell his goods without trying to be sure there was some competition among the buyers so that he could obtain a decent price for his goods. There is very little competition among the bidders for our public resources." *Id.* at 1155.

While opposed to amendment of the 1953 Act, Secretary of the Interior Morton conceded that

> "[t]he objectives of any bidding system must be to (a) insure receipt of fair market value, (b) provide incentives for prompt and thorough development, and (c) open access to the OCS for all firms capable of working leases in an environmentally responsible manner." *Id.* at 13.

Moreover, Secretary Morton himself admitted that

> "[o]n the Outer Continental Shelf, we have been collecting 16⅔ percent of all of the production. You might say, and I think very well say, this is not a high enough percent because we really don't get true value, if, at the time the bonus is bid, oil is selling at $5 and then it goes up to $10. The 16⅔ percent royalty is not high enough. We are examining that." *Id.* at 68.

100. In opposing amendment of the Outer Continental Shelf Lands Act, officials of the Department of the Interior testified on several occasions that they did not expect oil prices to rise significantly, if at all, during the next few decades. For example, Darius Gaskins, Director, Office of the Outer Continental Shelf, testified in March 1975 that "[t]he highest possible price we see in a 15-year period [until 1990] is $11 [per barrel]." *Id.* at 46. Royston Hughes, Assistant Secretary of the Interior for Program Development and Budget, testified before the Ad Hoc Select Committee in June 1975 that the Department, in estimating the value of projected production from a lease, used a constant price of $7.67 per barrel of oil (in present dollars) over the life of the lease. Mr. Hughes stated:

> "$7.67 is the figure we use which is the economists' prediction of what the price of oil will be 15 years from now." "Outer Continental Shelf Briefings": Hearings on H.R. 6218 Before the House Ad Hoc Select Committee on Outer Continental Shelf, 94th Cong., 1st Sess. 250 (1975).

In response to statements that the price of oil at that time was $12 per barrel, Mr. Hughes said:

> "[The price of oil] will decrease to $7.67 from $12, which is about one-third." *Id.* at 251.

101. The Committee most concerned with the reexamination of Federal OCS leasing policies was the House Ad Hoc Select Committee on the Outer Continental Shelf. Its report, issued on May 4, 1976, made several important points about the need for better administration of the federal offshore lands. H. Rep. No. 94-1084, 94th Cong., 2d Sess. (1976). In reviewing the history of federal OCS leasing, the Committee found

> "that the present law's grant of total discretion to the Secretary led to a situation where the petroleum industry had a too dominant voice in the setting of policy. . . . This close industry-Federal Government cooperation has often disregarded the interests of state and local governments and the taxpayer." *Id.* at 76.

Another concern expressed by the Committee was "that the present system provides too many advantages for industry at the possible expense of the taxpayer." *Id.* at 78. The Committee noted:

> "At present, the cash-bonus system is used almost exclusively. Under that system, in order to win a lease, a company must have vast amounts of capital, and the price to the company is set without full knowledge of the value of the oil and gas in the area. This may reduce competition for offshore leases to the major oil companies and reduce the public return for resources." *Id.* at 43.

102. Nonetheless, the Department of the Interior and the oil industry continued to oppose bills to amend the 1953 Outer Continental Shelf Lands Act. *See* Ad Hoc Committee Report at 78-79. Thus, a letter from the

Department of the Interior to the Ad Hoc Committee stated that

> "[t]he OCS Lands Act presently provides that leasing of OCS lands shall be by competitive sealed bidding on the basis of a cash-bonus bid with a fixed royalty or a bid-royalty with a fixed bonus, but in no instance can the royalty be less than 12.5 percent. The leases are for a five-year term. These provisions, coupled with the Department's geological experience and the means for acquiring such information, are sufficiently flexible for institution of the most desirable alternative leasing systems to promote competition while serving the public's interest in receiving a fair return for its resources and using those resources in the most responsible manner." Reprinted at Ad Hoc Committee Report, p. 166.

The Department represented to the Committee that it was "currently analyzing alternative bidding methods available to it under the OCS Lands Act of 1953," *id.* at 167, including "bonus bidding with increased royalty rates; royalty bidding; bonus bidding with net profit payments in lieu of royalties; net profit bidding; deferred bonus payments with forgiveness of the unpaid balance at the time of lease abandonment." *Id.* at 168. The Department also assured the Committee that "[c]urrent Departmental practices and studies are designed to assure that the lease auction[s] of OCS resource[s] are competitive to insure receipt of fair market value." *Id.* at 167.

103. After the change of administration in 1977 representatives of the Department of the Interior recognized the deficiencies of the present system and took a more supportive view of bills to amend the 1953 Act. In early 1977, Secretary Andrus, asked whether he though "in the past couple of decades . . . the public has gotten a reasonably fair return on the sale of its resources," answered that he had "a philosophical feeling that the

answer to your question is no. The public has not received what it should, but I cannot say to you or to the media, to the world, that that statement I just made is based on facts." "Outer Continental Shelf Lands Act Amendments of 1977": Hearings on H.R. 1614 Before the House Ad Hoc Select Committee on Outer Continental Shelf, 95th Cong., 1st Sess. 170 (1977). The Secretary also testified before the Ad Hoc Committee that

> "[t]he Department supports legislation providing the authority to devise, test and improve the bidding systems to be used. Flexibility is needed . . . if we are to carry out an orderly program that will assure fair return for the public resource, promote competition, and not cause distortions such as premature abandonment of production or inefficient reservoir management. We support the mandate to use alternative bidding systems, although these alternatives need not be limited to eight [bidding systems]." *Id.* at 159.

Secretary Andrus further testified:

> "The Department of Interior or the Department of Energy should have more flexibility in determining the methods of leasing and the bidding process. . . . [W]e have to look beyond today to tomorrow, and we would prefer the flexibility of a new method of bidding that would be utilized by maybe another nation or another entity that was successful. We would not want to be prohibited from using it if it would enhance competition, if it would improve the rate of return and the bidding process . . . ." *Id.* at 164.

The Secretary also noted that

> "we expressed concerns regarding the direction for federally contracted exploration. I think it is necessary that we have the flexibility and not be prohibited from moving into an area where, if we

choose, we could explore that resource ourselves and make a determination on our own as to the vastness of that resource, and then go to bid, sharing that information with the world. That would probably improve the competitive situation of that bid and give [help] some of the smaller independent companies that do not have the capabilities of the giants to know what resources are available." *Ibid.*

104. In written answers to the Ad Hoc Committee, the Department of Interior noted that

"[t]here are some disadvantages from placing most of the risk on private industry. It appears, for example, that not all segments of private industry are 'more than willing,' . . . to bear such risks. Smaller firms are less willing than large firms to bear such risks because of the likelihood that they could lose their investment and be threatened with bankruptcy by failure to find oil on any single leasehold. Larger firms have the resources to diversify their investments and survive such losses so that they can eventually find the large payoffs that are the incentive to bear such risks. Thus leaving risk to private industry tends to favor larger firms in the competition for OCS leases. This remains true even though non-majors can bid jointly. Both the elimination of some potential bidders and the formation of bidding consortia may reduce competition and may tend to reduce government revenues. The OCS Leasing Program has also been criticized because of the anti-competitive effects of cash-bonus bidding for leases on tracts whose value, before exploration, is highly uncertain. Both increased prelease exploration and alternative bidding systems are potential means of improving competition. They should be authorized so that we may implement the programs which are most effective." *Id.* at 198.

105. Despite these criticisms and other similar analyses of the Federal OCS Leasing Program, and despite the admissions made by Interior officials, the Secretary continued to adhere, with very few exceptions, to the cash-bonus, low-royalty bidding system. The Secretary did not conduct extensive exploration prior to lease sales, nor did the Secretary develop other methods to assure the adequacy of competition in the lease sale market and in the market for production and refining of crude oil.

Section V: The 1978 Amendments to the Outer Continental Shelf Lands Act: Legislative Action to Reform the Leasing Program.

106. The 1978 Outer Continental Shelf Lands Act amendments manifest Congressional dissatisfaction with the traditional cash-bonus, low-royalty leasing system. They make even more clear the need to assure a fair return to the public for its resources, to stimulate competition in the sale of leases and the production of oil, to encourage efficient exploitation and development, and to obtain adequate information to fulfill these purposes. The findings of the Act, Section 101, state that "the Outer Continental Shelf contains significant quantities of oil and natural gas and is a vital national resource reserve which must be carefully managed so as to realize fair value, to preserve and maintain competition, and to reflect the public interest."

107. Section 102 sets forth the purposes of the 1978 Act. In particular, the Act seeks to

> "preserve, protect, and develop oil and natural gas resources in the Outer Continental Shelf in a manner which is consistent with the need (A) to make such resources available to meet the nation's energy needs as rapidly as possible, (B) to balance orderly energy resource development with protection of the human, marine, and coastal environments, (C) to insure the public a fair and equitable return on the

resources of the Outer Continental Shelf, and (D) to preserve and maintain free enterprise competition."

It is also a purpose of the Act to "insure that the extent of oil and natural gas resources of the Outer Continental Shelf is assessed at the earliest practicable time." Section 102(9).

108. Section 202 of the Act specifically declares it to be the policy of the United States that "the Outer Continental Shelf is a vital national resource reserve held by the Federal Government for the public . . . ." Consistent with that policy, The Act states that "[l]easing activities shall be conducted to assure receipt of fair market value of the lands leased and the rights conveyed by the Federal Government." Section 206, amending Section 18(a)(4).

109. The 1978 amendments emphasize the need for recourse to a greater variety of bidding systems. Section 205, amending Section 8(a)(1). Bidding

> "shall be by sealed bid and, at the discretion of the Secretary, on the basis of—
>
> "(A) cash bonus bid with a royalty at not less than 12½ per centum fixed by the Secretary in amount or value of the production saved, removed, or sold;
>
> "(B) variable royalty bid based on a per centum in amount or value of the production saved, removed, or sold, with either a fixed work commitment based on dollar amount for exploration or a fixed cash bonus as determined by the Secretary, or both;
>
> "(C) cash bonus bid, or work commitment bid based on a dollar amount of exploration with a fixed cash bonus, and a diminishing or sliding royalty based on such formulae as the Secretary shall determine as equitable to encourage continued production from the lease area as resources diminish, but not less than 12½ per centum at the beginning

of the lease period in amount or value of the production saved, removed, or sold;

"(D) cash bonus bid with a fixed share of the net profits of no less than 30 per centum to be derived from the production of oil and gas from the lease area;

"(E) fixed cash bonus with the net profit share reserved as the bid variable;

"(F) cash bonus bid with a royalty at no less than 12½ per centum fixed by the Secretary in amount or value of the production saved, removed, or sold and a fixed per centum share of net profits of no less than 30 per centum to be derived from the production of oil and gas from the lease area;

"(G) work commitment bid based on a dollar amount for exploration with a fixed cash bonus and a fixed royalty in amount or value of the production saved, removed, or sold; or

"(H) subject to the requirements of paragraph (4) of this subsection, any modification of bidding systems authorized in subparagraphs (A) through (G), or any other systems of bid variables, terms and conditions which the Secretary determines to be useful to accomplish the purposes and policies of this Act, except that no such bidding system or modification shall have more than one bid variable."

The Act also states that

"[t]he bidding systems authorized by paragraph (1) of this subsection, other than the system authorized by subparagraph (A), shall be applied to not less than 20 per centum and not more than 60 per centum of the total area offered for leasing each year during the 5-year period beginning on the date of enactment of this subsection, unless the Secretary determines that the requirements set forth in this subparagraph are inconsistent with the purposes and policies of this Act." Section 205, amending Section 8(a)(5)(B).

110. The Secretary cannot use a bidding system unless appropriate regulations are in place at the time of the sale. Section 205, amending Section 8(a)(1), provides that a lease is to be granted to the highest bidder "under regulations promulgated in advance." Section 205, amending Section 8(a)(6), provides that, if any system using a net profits basis is used, regulations to govern the calculation of net profits must be in place at least ninety days prior to the notice of the lease sale. Promulgation of regulations with regard to bidding systems is the responsibility of the Secretary of Energy. See 42 U.S.C. § 7152(b).

111. The amendments also require the Secretary to notify Congress of the bidding systems to be used in forthcoming lease sales "and the reasons for the utilization." Section 205, amending Section 8(a)(8)(A) and (B). The Secretary is also required to report to Congress on an annual basis, stating the bidding systems used during the past year, the bidding systems to be utilized in the forthcoming years, the benefits and costs of using particular bidding systems, "the reasons why a particular bidding system has not been or will not be utilized," and his decisions regarding use of the cash-bonus, fixed-royalty bidding system. Section 205, amending Section 8(a)(9).

112. The 1978 amendments, like the 1953 Act, provide that the Secretary may award leases only by "competitive bidding." Section 205, amending Section 8(a)(1). In developing any bidding regulations under the Act, the Secretary of Energy must "request and give due consideration to the view of the Attorney General with respect to matters which may affect competition," and the Attorney General is required to consult with the Federal Trade Commission. Section 204. The Conference Report accompanying the 1978 Act indicates that "increasing competition" should be an important consideration in utilizing new bidding alternatives. *Id.* at 92.

113. The 1978 amendments contain numerous provisions to protect against concentration of the OCS oil and gas resources in the hands of large, integrated companies. Before the acceptance of any bids, the Secretary must allow the Attorney General, in consultation with the Federal Trade Commission, thirty days to review the results of the lease sale. Section 205, amending Section 8(c)(1). The amendments provide that the Attorney General "may, in consultation with the Federal Trade Commission, conduct such antitrust review on the likely effects the issuance of such leases would have on competition as the Attorney General, after consultation with the Federal Trade Commission, deems appropriate . . . ." Section 205, amending Section 8(c)(2). After that review, the Attorney General "may make such recommendations to the Secretary, including the nonacceptance of any bid, as may be appropriate to prevent any situation inconsistent with the antitrust laws." Section 205, amending Section 8(c)(3). The Secretary of Energy must promulgate regulations for the "fostering of competition for federal leases." 42 U.S.C. § 7142(b).

Section 205, amending Section 15(2) of the Act, provides that the Secretary must make an annual report, prepared after consultation with the Attorney General, "with recommendations for promoting competition in the leasing of Outer Continental Shelf lands." The report must contain an evaluation of authorized competitive bidding systems and their use or lack of use, the evaluation of bidding systems not currently authorized, "an evaluation of the effectiveness of restrictions on joint bidding in promoting competition," "an evaluation of present measures and a description of any additional measures to encourage entry of new competitors," and "an evaluation of present measures and a description of additional measures dealing with supplies of oil and gas to independent refiners and distributors."

The amendments also seek to increase competition among refiners as well as producers of crude oil. Any

oil and gas lease issued pursuant to the amendments must include a requirement that "the lessee offer 20 per centum of the crude oil, condensate, and natural gas liquids produced on such lease, at the market value and point of delivery applicable to the federal royalty oil, to small or independent refiners . . . ." Section 205, amending Section 8(b)(7).

114. The 1978 amendments also grant substantial authority to assure prompt development of the OCS gas resources. Section 204, amending Section 5(a)(7), specifically requires the Secretary to promulgate regulations "for the prompt and efficient exploration and development of a lease area." Moreover, the amendments require that a lessee "shall produce any oil or gas, or both, obtained pursuant to an approved development or production plan, at rates consistent with any rule or order issued by the President in accordance with any provision of law." Section 204, amending Section 5(g)(1). If no such rule has been issued,

> "the lessee shall produce such oil and gas, or both, at rates consistent with any regulation promulgated by the Secretary of Energy which is to assure the maximum rate of production which may be sustained without loss of ultimate recovery of oil or gas, or both, under sound engineering and economic principles . . . ." Section 204, amending Section 5(g)(2).

The Department of Energy is authorized, under Sections 302(b) and (c) of the Department of Energy Organization Act, to establish production rates for all federal oil and gas leases.

115. Section 205, amending 8(b)(4) of the Act, provides that any oil and gas lease shall "entitle the lessee to explore, develop, and produce the oil and gas contained within the lease area, conditioned upon due diligence requirements and the approval of the development and production plan required by this Act." Section 25(c)(5) requires that any production and development plan

specify "an expected rate of development and production and a time schedule for performance." The Secretary is authorized to cancel a lease for failure to comply with an approved plan, Section 25(j), and lessees are prohibited from bidding on new acreage "if the Secretary finds, after notice and hearing, that the bidder is not meeting due diligence requirements on other leases." Section 205, amending Section 5(d). The five-year leasing program which the Secretary must prepare, must include estimates of the appropriations and staff necessary to "supervise operations conducted pursuant to each lease in a manner necessary to assure due diligence in the exploration and development of the lease area in compliance with requirements of applicable law and regulations and with the terms of the lease." Section 208, amending Section 18(b)(4).

116. Section 26 of the 1978 amendments establishes an Outer Continental Shelf oil and gas information program. This program requires that

> "[a]ny lessee or permittee conducting any exploration for, or development or production of, oil or gas pursuant to this Act shall provide the Secretary access to all data and information (including processed, analyzed, and interpreted information) obtained from such activity and shall provide copies of such data and information as the Secretary may request." Section 26(a)(1)(A).

This Section also provides that the Secretary shall receive information from other Federal departments and agencies. Section 26(b)(1) says that "[d]ata and information provided to the Secretary pursuant to subsection (a) of this section shall be processed, analyzed, and interpreted by the Secretary for purposes of carrying out his duties under this Act." The Secretary is also required to share information with affected state and local governments.

117. Section 204, amending Section 5(b) of the Act, provides that "[t]he issuance and continuance in effect of any lease, or of any assignment or other transfer of any lease, under the provisions of this Act shall be conditioned upon compliance with regulations issued under this Act." Like the 1953 Act, the 1978 amendments provide that the Secretary may cancel a nonproducing lease, while a producing lease must be forfeited through a proceeding in District Court. Section 204, amending Sections 5(c) and (d).

118. Section 19 of the 1978 amendments provides that the Governor of an affected state or an executive of an affected local government may submit recommendations to the Secretary "regarding the size, timing, or location of a proposed lease sale or with respect to a proposed development and production plan." Section 19(c) states that

> "[t]he Secretary shall accept recommendations of the Governor and may accept recommendations of the executive of any affected local government if he determines, after having provided the opportunity for consultation, that they provide for a reasonable balance between the national interest and the well-being of the citizens of the affected state."

Section VI: Events Subsequent to Passage of the 1978 OCS Amendments: Administrative Failure to Implement the OCS Statute, Inability to Use Superior Bidding Systems, and Continued Adherence to the Discredited Cash-Bonus, Low-Royalty System.

119. Since passage of the 1978 OCS amendments, the Secretary has held three lease sales. In each sale, the Secretary relied heavily on the cash-bonus, low-royalty bidding system. Like previous sales, Lease Sales 65, No. 51 and No. 49 were conducted without adequate presale information to judge the value of the resources being

leased, and the bidding competition on Lease Sales 65, No. 51 and No. 49 was inadequate to ensure that the Government received a fair return for the leases granted. In Lease Sale 65, there was an average of 1.77 bidders per tract bid upon. Of the thirty-five tracts leased, twenty (57%) were awarded to the only bidder and nine (25%) to one of but two bidders. Sixty-one percent of the tracts offered received no bids. In Lease Sale 51, there was an average of 3.27 bidders per tract. Of the eighty-one tracts leased, sixteen (19%) were awarded to a single bidder, and twenty-one (25%) were awarded to one of two bidders. Twenty-seven percent of the tracts offered received no bids. In Lease Sale No. 49, there was an average of 1.68 bidders per tract. Of the thirty-nine tracts leased, twenty-two (56%) were leased to the only bidder, and nine (23%) were leased to one of only two bidders. Sixty percent of the tracts offered received no bids.

120. The lease sales conducted after amendment of the Act have not achieved a broader distribution of OCS resources among large and small producers. In Lease Sale No. 65, sixty percent of the tracts were obtained by the eight largest oil companies; eighty-nine percent were obtained by the twenty largest companies. In Lease Sale 51, the comparable figures were sixty-one percent and seventy-three percent. In Lease Sale No. 49, the figures were twenty-seven percent and forty-five percent. The effect of such concentration, at a minimum, is to place potential oil and gas resources under the control of companies that have counterincentives to develop them promptly or in a manner that promotes competition.

121. Prior to Sales 65, 51, and 49, the Energy Action Educational Foundation, on behalf of itself and "those who may assert similar positions," protested to the Secretary of the Interior that leases issued in those sales (and future sales conducted on a similar basis) would be in violation of the Outer Continental Shelf Lands Act and the Secretary's fiduciary obligations. See Appendix

B. Energy Action asked the Secretary to notify all prospective bidders that this claim of presumptive invalidity had been made, and Energy Action itself notified bidders at Sales 51 and 49.

122. Since September 1978, oil prices have again risen sharply, and concern has increased about sources of crude oil supply. The National Energy Plan submitted by President Carter to Congress in May 1979 warns that world oil prices could reach $55 a barrel by 1990, about $30 a barrel in current dollars, "unless there are major changes in forecasted energy production and consumption trends or efforts by Government." The projected price in current dollars would be approximately double the current price of $16.00 a barrel, which itself has risen from $12.70 a barrel in 1978. Thus, the United States is continuing to sell oil and gas resources in a time of rising prices, a situation in which former Secretary Morton conceded that recovery of a 16⅔% royalty was not enough. See paragraph 99, *supra*.

123. Although the 1978 amendments require that competitive bidding take place "under regulations promulgated in advance," and the Secretary of Energy is required to develop regulations for alternative bidding systems under 42 U.S.C. § 7152, the Secretary of Energy has not yet promulgated any new regulations. Moreover, the 1978 amendments require that regulations establishing rules to govern the calculation of net profits be adopted at least ninety days before notice of any lease sale using a net-profits system. The Secretary of Energy has not promulgated any such regulations. As a result, the Secretary of the Interior is planning to conduct lease sales without the flexibility to employ certain alternative bidding systems that would provide better assurance of fair value to the public and prompt development of oil and gas resources. Secretary Andrus has himself testified before the Ad Hoc Committee that such flexibility is needed.

"if we are to carry out an orderly program that will assure fair return for the public resource, promote competition, and not cause distortions such as premature abandonment of production or inefficient reservoir management." "Outer Continental Shelf Lands Act Amendment of 1977": Hearings on H.R. 1614 Before the House Ad Hoc Select Committee on Outer Continental Shelf, 95th Cong., 1st Sess. 159 (1977).

In addition, there are no regulations governing competitive review procedures and standards, thus making it unlikely that the Attorney General, Federal Trade Commission, or Department of the Interior can fulfill their respective responsibilities to "preserve and maintain competition," particularly in the decision whether to accept or reject particular bids. See January 18, 1979 letter from John H. Shenefield, Assistant Attorney General, Antitrust Division, to Cecil D. Andrus.

124. A very recent report by the Comptroller General makes clear that the issuance of regulations, including regulations pertaining to alternative bidding systems for Outer Continental Shelf lands, is being delayed and frustrated by jurisdictional disputes between the Department of Energy and the Department of the Interior. *Federal Leasing Policy—Is the Split Responsibility Working?* at 3, 4, 8, 10-11, 14. This continuing disagreement between the Departments has had particularly damaging effects on bidding for federal leases since Interior almost one year ago rejected draft regulations for alternative bidding systems, claiming that "the regulations would have given Energy the responsibility for implementing the regulations which is, according to [Interior officials], the Interior's responsibility." *Id.* at 10. The Report notes that "[t]he results of the disagreement between the Departments are delays in the development and implementation of regulations which are viewed as integral components of federal leasing programs," including "development and implementation of alternative bidding sys-

tems [that] could have an impact on OCS oil and gas production by bringing in more companies and thereby increasing competition." *Id.* at 11.

125. On March 15, 1979, the Secretary issued a draft sale notice for proposed sale No. 48 in the offshore waters of Southern California. Federal Register, Vol. 44, No. 57 (March 22, 1979). The notice specifies that leases on 147 tracts will be sold in June 1979. According to the notice, seventy-seven of the tracts will be awarded on the basis of a cash-bonus bid with a fixed royalty of 16⅔%. The remaining tracts will be offered on the basis of a cash-bonus bid with a sliding-scale royalty beginning at 16⅔% when quarterly production is valued at less than $10,000,000, 21.9% when quarterly production is valued at less than $30,000,000, 32.9% when quarterly production is valued at less than $90,000,000, 43.9% when quarterly production is valued at less than $270,000,000, and 54.9% when quarterly production is above that amount. No tracts will be offered on the basis of royalty bids or bids of a net-profits share. The State Lands Commission has notified the Secretary of its belief that leases issued in Lease Sale No. 48 will be in violation of the Outer Continental Shelf Lands Act and the Secretary's fiduciary obligations. See Appendix C.

126. In November 1978, the Department of the Interior issued a study saying that, on leases issued from 1954 through 1969, lessees had not received an above-average rate of return. This study was seriously flawed: it depended on uncertain or inaccurate estimates about the costs incurred by lessees in connection with the leases and it made unreliable and unrealistically low projections about future reserves. Moreover, the study focused only on leases issued before 1970; a great part of the production from those leases occurred at the prevailing low oil and gas prices of the 1960's and early 1970's, while production from later leases will be achieved exclusively at far higher, and still rising, prices. See Appendix D.

127. While leasing has been, and will be, continued under the discredited cash-bonus, low-royalty system, it has become even clearer that there are superior alternative systems. In testimony before the Ad Hoc Select Committee in December 1978, Deputy Under Secretary Barbara Heller, Department of the Interior, indicated that a bidding system based on a share of the net profits from federal leases could provide substantial benefits to the public:

> "In our bidding system tests to date we have tried to find ways to reduce bonus levels without incurring production losses. Our plans for the future focus on a system that promises to do this very well: profit sharing. Under the profit sharing system, the Government takes a share of the profits, after the operator's investments are paid out, whenever oil or gas is found and produced. This can substantially reduce bonuses, and may thus improve competition. Unlike high royalty rates, however, high profit share rates should not provide a disincentive to produce oil and gas. Even though profits are shared, they are never reduced to zero as they can be under high royalty rates. "O.C.S. Amendments of 1978—Oversight": Hearings Before the House Ad Hoc Select Committee on Outer Continental Shelf, 95th Cong., 2d Sess. 305 (1978).

Subsequently, Robert J. Kalter, Director, Leasing Programs, Department of Energy, agreed that a profit sharing system was preferable:

> "As Barbara Heller mentioned this morning, both of our agencies think that the profit-sharing system is the next major alternative system that should be implemented and in anticipation of the passage of the amendment we initiated in April a major analysis of the types of profit-sharing bidding system best suited to the Outer Continental Shelf program in the United States. The analysis encompasses the

> theory that a net profit-sharing bidding system increases competition by reducing the cash bonus bid and allows greater participation. Under such a system, the risks associated with oil and gas exploration are more equitably shared by the Government and industry. Accordingly, this could lead to more efficient utilization of capital for the exploration and development of Outer Continental Shelf oil and gas resources. *Id.* at 456.

Even more recently, the Department of Energy has submitted a report to Congress that emphasizes the disadvantages of a cash-bonus, fixed-royalty system and concludes that other systems are more desirable:

> "A bidding system that places most of the emphasis on cash bonus payments causes the lessee to bear most of the risks associated with finding or not finding commercial quantities of oil and/or gas. This could lead to significant risk discounting of bonus bids. On the other hand, the low contingency payments associated with heavy emphasis on bonus payments prevent the government from capturing the 'larger than expected' economic rents generated by large finds. These are the typical drawbacks attributed to a traditional cash bonus bidding system with a low fixed royalty. If contingency payments are set too high, it could discourage the development of marginal deposits or early abandonment of production. For these reasons, a bidding system that attempts to balance out the advantages and disadvantages of heavy emphasis on cash bonus vs contingency payments is desirable." *Report to Congress on Various Bidding Options Used in FY-78 Lease Sales on the Outer Continental Shelf*, at 13.

Despite this testimony, and similar views expressed in the 1977 memorandum from Marshall Rose of Interior, see paragraph 87, *supra*, the Secretary is proposing to conduct Lease Sale No. 48 in June 1979 by cash-bonus

bidding without any recourse to, or opportunity for, royalty bidding or net-profits bidding. *See* paragraph 125, *supra.*

128. In March 1979, the Comptroller General issued a report on Lease Sale 43, entitled "Georgia Embayment—Illustrating Again The Need For More Data Before Selecting and Leasing Outer Continental Shelf Lands." The Report noted that "the data available to select and value tracts was limited and, in some cases, less than in the prior sales reviewed, "*id.* at 2, and it observed:

> "Had more information been available on the resource potential prior to scheduling the area for sale, perhaps the area would not have been put up for lease at this time." *Id.* at 14.

The Report also emphasized that, by any criterion, "competition was very limited." *Id.* at 11. In fact, eighty-one percent of the tracts bid upon received only one or two bids. *Ibid.* The Report stated:

> "When large percentages of the total tracts in a sale receive one or two bids per tract and are minimally valued based on poor information, there can be no assurance that the public received a fair market value return for the potential resources leased." *Id.* at 10.

Section VII: Injuries to Plaintiffs Caused by the Unlawful Federal Leasing Program.

129. The cash-bonus, low-royalty leasing system causes direct economic harm to the consumers named in paragraph 3, *supra*, by denying them the price and supply benefits of the more competitive market for oil and gas that the Outer Continental Shelf Lands Act seeks to promote. Because the high risk and the cash-bonus requirement limit the ability for independent producers to bid for and obtain federal leases, most federal off-

shore oil and gas resources have been captured by major, integrated companies. If independent producers were allowed greater participation in the federal leasing program, as they would be under alternative bidding systems authorized by the Outer Continental Shelf Lands Act, consumers could secure the benefits of greater competition in the production and sale of oil and gas.

Consumers are also injured because the major companies have counterincentives to rapid and thorough development of their oil and gas resources. The consequent continuing limitation of production has led to reduced supplies of domestic oil and gas. The prompt exploitation that the Act seeks to assure, but that defendants' conduct has tended to deny, is particularly important at the present time when consumers are threatened with severe shortages of gasoline and heating oil.

130. The Federal taxpayers named in paragraph 3, *supra*, have been injured by the failure of the Government to obtain fair return, and by inadequate development of the Outer Continental Shelf resources under cash-bonus, low-royalty leasing that further reduces the income to the Federal Government by depressing the amount of royalty payments. Because the payments from OCS leasing are placed in the general fund of the Treasury, the failure of the Secretary to obtain fair value for public oil and gas resources denies revenues to the Government to the injury of the taxpayers.

131. The citizens of the United States named in paragraph 3, *supra*, are joint owners of the oil and gas resources on the Outer Continental Shelf. As such, they are beneficiaries of a trust administered by Congress, and the Secretary by delegation, for their benefit. They are injured whenever Congress gives away their property for less than fair value.

The lands of the United States, and the oil and gas produced from those lands, are a nonrenewable resource. Citizens of the United States are entitled to demand that

Congress and the Secretary exercise the utmost care in transferring those resources to private interests. The failure of the Federal Government to assure the receipt of fair value for offshore oil and gas resources has caused them significant and irreparable injury.

132. The State Lands Commission and the City of Long Beach, like the United States, have responsibility for the leasing of oil and gas lands held in trust for the public. Use of the cash-bonus, low-royalty leasing system, which is contrary to the Outer Continental Shelf Lands Act, will cause direct injury to these plaintiffs in at least three distinct ways:

a. The California plaintiffs' future ability to lease their undeveloped oil and gas lands on advantageous terms is threatened by the unduly generous and numerous low-royalty Federal OCS leases granted in the future.

b. California plaintiffs cannot be assured of production on their own leases in the future when lessees can realize higher profits under over-generous and large-yield Federal leases.

c. The very large Federal OCS properties scheduled for development over the next 20-30 years, with projected quantities of Federal oil on the West Coast approximating 220,000 barrels, per day in contrast to the very modest amount of Federal oil produced on the West Coast in the past, now threatens to cause reduced revenues in the future from California plaintiffs' leases, which require higher payments to the lessors than do the scheduled Federal low-royalty leases.

FIRST CAUSE OF ACTION:

IN VIOLATION OF THE OUTER CONTINENTAL SHELF LANDS ACT AMENDMENTS, DEFENDANTS HAVE FAILED TO ISSUE REGULATIONS TO IMPLEMENT THE BIDDING SYSTEMS AUTHORIZED BY THE 1978 AMENDMENTS, AND PROPOSE TO CONTINUE TO USE INFERIOR BIDDING SYSTEMS THAT DO NOT ASSURE RECEIPT OF FAIR VALUE, ADEQUATE COMPETITION, OR EFFICIENT DEVELOPMENT.

133. The Outer Continental Shelf Lands Act, as amended in 1978, requires that

> "[l]easing activities shall be conducted to assure receipt of fair market value for the lands leased and the rights conveyed by the Federal Government." Section 206, amending Section 18(a)(4).

134. Congress has authorized the Secretary to conduct lease sales pursuant to bidding systems other than the cash-bonus, low-royalty system or the cash-bonus, sliding-scale royalty system, in order to assure fair value, promote competition, and encourage efficient development of OCS resources. Section 205, amending Section 8(a)(1) of the Outer Continental Shelf Lands Act, gives the Secretary the authority to use seven specified bidding systems and to develop other one-variable bidding systems. Congress has made plain its intention that the Secretary is to use other bidding systems, Section 205, amending Section 8(a)(5)(B), and even requires the Secretary to report to it about the bidding systems planned for forthcoming lease sales and the reasons for use of particular bidding systems in past lease sales. Section 205, amending Sections 8(a)(8)(A) and (a)(9). The Secretary must select the bidding system for each sale that best satisfies the requirement of Section 18(a)(4) that "[l]easing activity shall be conducted to assure receipt of fair market value."

135. Although Congress has authorized alternative bidding systems, the Secretary has not fulfilled his duty to consider the full range of bidding systems for Lease Sale 48 and other scheduled lease sales. This default results from the decision to hold additional lease sales prior to the time that regulations governing the use of alternative bidding systems are in place. The Act specifies that competitive bidding for leases must be conducted "under regulations promulgated in advance," Section 205, amending Section 8(a)(1), and that regulations for the calculation of net profits must be developed at least ninety days prior to notice of any lease sale using a net profits bidding system. Section 205, amending Section 8(a)(6).

136. During the nine months since enactment of the 1978 amendments to the Outer Continental Shelf Lands Act on September 18, 1978, the Secretary of Energy has failed to promulgate any regulations pertaining to alternative bidding systems or to the calculation of net profits. See paragraph 123, *supra*. As a result, the Secretary of the Interior is disabled from using, or even considering, bidding systems set forth by Congress at Sections 8(a)(1)(D), (E), (F) and G) of the Act, as amended, including any system involving a sharing of net profits. At the present time, the Secretary is limited to use of less than one-half of the options made available by Congress in the Act. Moreover, there are no regulations to implement a meaningful competitive review, as required by the Act (see paragraph 123, *supra*), and such meaningful competitive review has not been taking place since enactment of the amendments. A recent Comptroller General Report shows that defendants themselves, by a continuing course of interdepartmental disagreements, have been responsible for the failure to implement necessary and important provisions of the Act. See paragraph 124, *supra*.

137. The Secretary, members of his Department, and members of the Department of Energy have repeatedly

emphasized that the sharing of net profits, unlike royalty systems with cash bonus bidding, increases competition and assures fair return without inhibiting the development of resources. See paragraphs 87, 99, 103-104, 127, *supra.* Those statements make clear that continued use of cash-bonus bidding systems, in disregard of net profit sharing or other, more effective systems, cannot be justified as a matter of policy or necessity.

138. As a result of the failure to promulgate regulations pertaining to alternative bidding systems, the Secretary is proposing to conduct Lease Sale 48 and other future lease sales pursuant to the cash-bonus, low-royalty bidding system and the cash-bonus, sliding-scale royalty bidding system, although neither system assures the receipt of fair market value or value equivalent to that obtainable under profit sharing systems. Competition for leases under both systems is inadequate to assure fair value because lessees must pay substantial cash bonuses and assume the risks of nondiscovery, development and exploration costs, and future markets. The high degree of risk prevents meaningful participation by small, independent companies and tends to depress bids. In addition, the Government cannot be assured of fair value because it lacks sufficient information about the value of the resources to assess accurately whether the highest bid for a tract should be accepted or rejected.

139. It is particularly inexcusable for defendants to continue to use a cash-bonus, 16⅔% royalty system when it has been demonstrated that payment of a sliding-scale royalty beginning at 16⅔% and increasing with production values to substantially higher royalties does not lessen the amount of the cash bonus. See paragraph 75, *supra.*

140. The Outer Continental Shelf Lands Act does not allow the Secretary to lease federal oil and gas resources on the Outer Continental Shelf without considering all authorized leasing options in order to meet the purposes and objectives of the Act. The Secretary will be able to

do so by rescheduling Lease Sale No. 48, and other scheduled lease sales, at a time when the Department of Energy has promulgated the necessary regulations and he has had sufficient time to give the regulations and the options thereunder full consideration.

141. The decision of the Secretary to hold Lease Sale No. 48 and other lease sales pursuant to cash-bonus, low-royalty bidding, before the Department of Energy has promulgated the necessary regulations governing alternative bidding systems, is inconsistent with his responsibilities as guardian of the public lands and violates his duties under the Outer Continental Shelf Lands Act.

142. The decision of the Secretary to hold Lease Sale 48 and other lease sales pursuant to cash-bonus, low-royalty bidding, before the Department of Energy has promulgated the necessary regulations governing alternative bidding systems, is arbitrary, capricious and a clear abuse of discretion.

143. Plaintiffs have no adequate remedy at law. Unless future lease sales are enjoined until necessary regulations are in place, the Secretary will give away the public's oil and gas resources to private lessees without adequate information, without effective competition, and without the assurance of fair return.

WHEREFORE, plaintiffs ask this Court to issue declaratory and injunctive relief prohibiting defendants from conducting Lease Sale 48 or any future lease sales until the Secretary of Energy has promulgated regulations governing use of all alternative bidding systems authorized in Section 8(a)(1) of the Outer Continental Shelf Lands Act, as amended, including systems allowing for the sharing of net profits, and the Secretary of the Interior has had an opportunity to consider, and has considered, use of those alternative systems for each scheduled lease sale.

SECOND CAUSE OF ACTION:

CASH-BONUS, LOW-ROYALTY BIDDING SYSTEMS, WHICH DO NOT ASSURE RECEIPT OF FAIR VALUE, DO NOT PROMOTE COMPETITION IN THE LEASE SALE MARKET OR IN THE PRODUCTION OF OIL, AND DO NOT ADEQUATELY ENCOURAGE DEVELOPMENT OF OUTER CONTINENTAL SHELF OIL AND GAS, ARE INCONSISTENT WITH THE OUTER CONTINENTAL SHELF LANDS ACT AND ARTICLE IV, SECTION 3, CL. 2 OF THE UNITED STATES CONSTITUTION.

144. Article IV, Section 3, Cl. 2 of the United States Constitution provides that "[t]he Congress shall have power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States." Pursuant to that provision, Congress holds public property as trustee for citizens of the United States. *United States* v. *California*, 332 U.S. 19. As trustee, Congress may not transfer public lands to private interests at less than fair value unless the transfer serves an overriding public need and the circumstances do not permit receipt of fair value. The Supreme Court has said "[Congress] would be recreant to its duties as trustee for the people of the United States to permit any individual or private corporation to monopolize [public lands] for private gain . . . ." *Camfield* v. *United States*, 167 U.S. 518, 524 (1896).

145. Congress sought to fulfill its responsibilities as trustee of Federal lands on the Outer Continental Shelf by enacting the provisions of the 1953 Outer Continental Shelf Lands Act and the 1978 amendments. As discussed in paragraphs 18-29, *supra*, Congress in the 1953 Act gave the Secretary the authority to implement leasing systems that derived adequate information, promoted competition in the sale of leases, allowed a broad range of companies to participate in the production of oil, pro-

vided for effective exploitation of domestic resources, and assured receipt of fair value. In 1978, after the Secretary had been subjected to substantial criticism for his failures under the 1953 Act, Congress became disenchanted with previous conduct of the federal leasing program and amended the Act to make even clearer its insistence that the program be managed to assure fair market value, to promote competition, and to provide for efficient development of the resources. The Act imposes affirmative duties on the Secretary to achieve those objectives. See paragraphs 106-127, *supra.*

146. Despite the responsibilities imposed upon him by the 1978 amendments, the Secretary has continued to conduct, and is proposing to further conduct, offshore leasing by substantial reliance on a cash-bonus, low-royalty bidding system that not only has not promoted the objectives of the Outer Continental Shelf Lands Act, but has frustrated them. See paragraphs 30-105, *supra.* The cash-bonus system favored by the Secretary has limited competition predominantly to large, multinational companies, inhibited development of resources, and failed to provide or assure receipt of fair value. Its continued use effectively transfers public resources to a small number of large, multinational companies, contrary to the provisions and purposes of the Outer Continental Shelf Lands Act, and forces consumers either to buy back their own resources at inflated prices or to face serious shortages of necessary fuels.

Despite the documented failure of the cash-bonus, low-royalty system and despite evidence that alternative systems would allow the Secretary to meet his obligations under the Outer Continental Shelf Lands Act, see, *e.g.*, paragraphs 69-79, 87, 127, *supra*, the Secretary has consistently refused to discard cash-bonus bidding in favor of other authorized systems that would lessen the risks to lessees and thus increase competition and assure fair return.

147. The cash-bonus, low-royalty system not only has failed to meet the objectives of the Outer Continental Shelf Lands Act but necessarily will continue to violate the Act in the future. Given the meager information available at the time of sale, the heavy cash-bonus requirement prevents the competition necessary to achieve fair value.

148. The continued use of the cash-bonus, low-royalty bidding system, which has been shown incapable of providing adequate competition in the lease sale market, assuring fair value, encouraging development, and distributing oil and gas resources to a broad range of companies, is inconsistent with the responsibilities of Congress as trustee for the public lands and violates the Outer Continental Shelf Lands Act in the following respects:

a. It does not "preserve, protect, and develop oil and natural gas resources in the Outer Continental Shelf in a manner which is consistent with the need (A) to make such resources available to meet the nation's energy needs as rapidly as possible, . . . (C) to ensure the public a fair and equitable return on the resources of the Outer Continental Shelf, and (D) to preserve and maintain free enterprise competition," as contemplated by Section 102 of the Act, as amended, nor does it "realize fair value, . . . preserve and maintain competition, and . . . reflect the public interest," as required by Section 101 of the Act, as amended.

b. It does not provide for adequate "competitive bidding," as required by Section 8(a)(1) of the Act, as amended.

c. It does not protect against concentration of the oil and gas resources in the hands of large integrated companies, as contemplated by Section 8(c)(1), Section 8(c)(2), Section 8(c)(3), and Section 15 of the Act, as amended.

d. It does not encourage "the prompt and efficient exploration and development of a lease area," as contemplated by Section 5(a)(7) of the Act, as amended.

e. It does not "assure receipt of fair market value for the lands leased and the rights conveyed the Federal Government," as required by Section 18(a)(4), as amended.

149. The continued use of the cash-bonus, low-royalty system is arbitrary and capricious, and a clear abuse of discretion.

150. The plaintiffs have no adequate remedy at law. Unless the use of cash-bonus, low-royalty bidding in future lease sales is enjoined, the Secretary will give the public's oil and gas resources to private lessees without adequate information, without the safeguard of effective competition, and without the assurance of fair value.

WHEREFORE, plaintiffs ask this Court to issue declaratory and injunctive relief against further use of the cash-bonus bidding system with a fixed royalty of 16⅔% and any other fixed low-royalty bidding system that fails to meet the requirements of the Outer Continental Shelf Lands Act, as amended.

THIRD CAUSE OF ACTION:

THE DEFAULT OF DEFENDANTS IN ASSURING THAT LEASES MET STATUTORY OBJECTIVES REQUIRES A COMPREHENSIVE INVESTIGATION BY DEFENDANTS TO FACILITATE APPROPRIATE CORRECTIVE ACTION.

151. Pursuant to Article IV, Section 3, Cl. 2 of the Constitution, Congress has a general fiduciary duty to obtain fair value for public resources transferred to private interests. See paragraph 144, *supra*. Congress codified that obligation in the Outer Continental Shelf Lands Act. See paragraph 145, *supra*.

152. In violation of the Constitution, the Outer Continental Shelf Lands Act, and his responsibilities as trustee, the Secretary since 1954 has carried on a leasing program that has denied and will continue to deny the public fair value for its offshore oil and gas resources.

The Secretary knew, or should have known, that continued use of the cash-bonus, low-royalty system was detrimental to the public interest and in excess of his authority under the Outer Continental Shelf Lands Act.

153. The Secretary knew or should have known that the beneficiaries of the cash-bonus, low-royalty federal leasing program—the lessees—formulated bids and accepted leases with awareness that the Secretary would continue to grant leases for less than fair value in violation of his responsibilities. Lessees have shown by their performance at other lease sales, see paragraphs 69-79, *supra*, that they can and will pay a greater share of production value when it is required of them by the Government.

154. The Secretary has hued to cash-bonus, low-royalty leasing as a result of his failure to investigate adequately and his acceptance of company claims as to their rates of return and the share received by the Federal Government, under cash-bonus, low-royalty leases. Industry representatives in 1975 assured Congress and the public that the Federal Government received as much as ninety-five percent of the value of production from the leases, although the percentage figure included all cash bonuses previously paid for leases while suppressing the value of future production from those leases. *See, e.g.*, Hearings on H.R. 6218 Before the House Ad Hoc Select Committee on Outer Continental Shelf, 94th Cong., 1st Sess. at 168, 170, 387, 466-467, 566, 1752-1753, 1758 (1975).

The Department of the Interior, in explaining use of the cash-bonus, low-royalty system, has perpetuated such misleading figures. For example, Secretaries of the Interior, in testimony before Congress, have agreed with oil company representatives that the Federal Government is receiving a very high share of production revenues from offshore leases although the figures used, like the figures urged by the companies, allowed fully for past bonuses but suppressed revenues from future production.

See, e.g., id. at 2639-2640; Joint Hearings on S. Res. 45 and S. Res. 222 Before the Senate Committees on Interior and Insular Affairs and Commerce, 94th Cong., 1st Sess. 41, 48 (1975). Furthermore, in developing estimates of company profits under leases, the Secretary has not insisted upon independent determinations of costs and taxes, but has relied almost exclusively on industry estimates. This approach has led to a significant understatement of return to the lessees. As a consequence, the Secretary has continued his dependence upon the cash-bonus, low-royalty system despite severe losses to the Federal Government.

155. Secretary has failed to investigate the bid practices of lessees and arrangements between lessees with respect to bids and future bidding, thus defaulting on his duty to be assured that OCS leases are surrendered for fair value under a competitive bidding system.

156. Defaults by the Secretary have permitted loss of public revenue. A recent study by the Comptroller General reveals that lessees, through errors and delays, have fallen millions of dollars in arrears on royalty payments under their leases, including offshore leases, and that there have been "serious deficiencies in the way the Geological Survey [of the Department of the Interior] maintained records of amounts due the Government under the terms of these leases." *Oil and Gas Royalty Collections—Serious Financial Management Problems Need Congressional Attention*, April 13, 1979, at i. The study showed that "[a]ll data used in the royalty collection system originated with the oil and gas industry" and that "[b]ecause the Geological Survey was not performing adequate numbers of lease account reconciliations and audits, it had to rely on unverified data from the oil and gas industry to compute and collect royalties due." *Ibid.* Yet the Report also indicated that "royalties due are normally understated by 7 to ten percent" (*id.* at 16), a figure that would mean an understatement of 60-90 million dollars in 1977. The uncollected money

was held by the industry without interest charge, and the Department of the Treasury was faced with a need to borrow to offset the shortfall. *Id.*, at ii.

157. The Secretary has also been derelict by failing to assure that lessees develop leased lands promptly. A very recent report by the Comptroller General, see paragraph 63d, *supra*, indicates a serious laxity by the Secretary in requiring due diligence in developing natural gas leases. The Report points out that "the Department of the Interior has no regulations to guide lessees in the exploration, development, and production of natural gas from Federal lands," *id.* at i, and "no standards for gauging whether lessees are exploring and developing their leases in a timely manner . . . ." *Id.* at iii. Adopting a "hands-off policy," *id.* at ii, the Department has allowed lessees "absolute discretion in directing the development and production decisions for the entire 5-year primary term" and, despite its broad authority to terminate leases at the end of five years, has "liberally regulated" development of leases even beyond their primary term. *Id.* at 7.

The Department has persisted in this administrative mismanagement in the face of repeated requests for change. As the Report notes:

> "With the continued threat of gas supply shortages in the forefront, various parties, including State regulatory commissioners, Congressmen, and members of the public, since 1970, have called for a policy addressing diligence in exploration, development, and production of OCS leases. Interior has responded primarily by gathering more information on the status of its leases and on explaining its practices to the Congress and the public. Despite an obvious need, a policy to help alleviate the shortages has not been developed."

158. These defaults by the Secretary are not unique in the administration of the offshore leasing program.

The Secretary historically has done little to police bidding arrangements or to assure the receipt of complete and accurate information from the oil companies.

159. The Secretary has failed to protect the public by acquiring accurate information and by forcing lessees to satisfy the objectives of the Outer Continental Shelf Lands Act.

WHEREFORE, plaintiffs ask this Court to issue an order directing defendants:

To review in detail every lease obtained pursuant to cash-bonus, low-royalty bidding to determine whether the issuance or continuance of each lease was consistent with the requirements of the Outer Continental Shelf Lands Act and all other legal requirements; and to take appropriate corrective action in any instance where the Secretary determines that issuance or continuance of any lease was not consistent with all legal requirements.

On account of the foregoing allegations, plaintiffs ask for the relief specified in each of their causes of action, for the award of costs and reasonable attorneys' fees, and for such other relief as may be necessary or appropriate.

/s/ Joseph L. Rauh, Jr.
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UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

Civil Action No.

ENERGY ACTION, ET AL., PLAINTIFFS

v.

CECIL D. ANDRUS, Secretary of the Interior, ET AL.,
DEFENDANTS

AFFIDAVIT OF EDWIN ROTHSCHILD

DISTRICT OF COLUMBIA)
) ss.
CITY OF WASHINGTON)

The affiant, EDWIN ROTHSCHILD, having been duly sworn, states as follows:

1. I am a resident of McLean, Virginia. I am presently the Research Director of the Energy Action Educational Foundation. I have held the position of Research Director since October, 1977.

2. As Research Director, I have participated in Energy Action's preparation and submission of comments to the Department of the Interior on numerous Outer Continental Shelf lease sales from 1977 to the present. In addition, I have appeared personally from time to time at hearings conducted by the Department of the Interior concerning offshore natural gas and oil lease sales, leases and related matters.

3. I have read the Complaint in the above-captioned case and, on information and belief, verify as true and correct the factual allegations set forth therein.

DATED this 20th day of June, 1979.

/s/ Edwin Rothschild
EDWIN ROTHSCHILD

DISTRICT OF COLUMBIA)
) ss.
CITY OF WASHINGTON)

Subscribed, sworn to and acknowledged before me, a Notary Public in and for the State and City aforesaid, by Edwin Rothschild, on this 20th day of June, 1979.

[SEAL]

/s/ Beth L. Fowler
Notary Public
My Commission Expires
February 14, 1984

APPENDIX A

CONSUMER ENERGY COUNCIL OF AMERICA MEMBER ORGANIZATIONS

Adams Electric Cooperative, Inc.
AFL-CIO
Allegheny Electric Cooperative, Inc.
Amalgamated Clothing & Textile Workers Union, AFL-CIO
American Federation of State County & Municipal Employees, AFL-CIO
American Federation of Teachers, AFL-CIO
American Public Gas Association
American Public Power Association
Association of Illinois Electric Cooperatives
Association of Texas Electric Cooperatives, Inc.
Basin Electric Power Cooperative
Central Power Electric Cooperative, Inc.
Citizen/Labor Energy Coalition
Consumer Federation of America
Cooperative League of the USA
East River Electric Power Cooperative, Inc.
Florida Electric Cooperatives Association
Hoosier Energy Division, Indiana Statewide Rural Electric Cooperative
Industrial Union Department, AFL-CIO
International Association of Machinists and Aerospace Workers, AFL-CIO
International Molders and Allied Workers Union, AFL-CIO
Kansas Electric Cooperatives, Inc.
Kansas Municipal Utilities
Lincoln (Nebraska) Electric System
Marine Engineers Beneficial Association
Maritime Trades Department, AFL-CIO
Minnesota Farmers Union
National Council of Senior Citizens
National Farmers Organization

National Farmers Union
National Rural Electric Cooperative Association
North Carolina Electric Membership Corporation
North Dakota Farmers Union
Northeast Missouri Electric Power Cooperative
Northeast Public Power Association
Northwest Iowa Power Cooperative
Northwest Public Power Association
Oil, Chemical and Atomic Workers International Union, AFL-CIO
Pennsylvania Rural Electric Association
Rocky Mountain Farmers Union
Service Employees International Union, AFL-CIO
South Dakota Farmers Union
South Texas Electric Cooperative, Inc.
Southside Electric Cooperative Inc.
Tennessee Valley Public Power Association
Texas AFL-CIO
Tillamook Peoples Utility District
United Auto Workers
United States Conference of Mayors
United Steelworkers of America, AFL-CIO
Valley Electric Cooperative
Washington Public Utility Districts' Association
Wisconsin State AFL-CIO

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CITIZEN/LABOR ENERGY COALITION

NATIONAL OFFICERS

William W. Winpisinger, President
International Association of Machinists

William Hutton, Secretary-Treasurer
National Council of Senior Citizens

EXECUTIVE COMMITTEE

Mike Ansara
Massachusetts Fair Share

Ira Arlook
Ohio Public Interest Campaign

Ellen Berman
Consumer Energy Council of America

Roger Blobaum
Rural America

Ed Carlough
Sheet Metal Workers' International Association

Bob Creamer
Illinois Public Action Council

Louise Dunlop
Environmental Policy Center

Joe [illegible]
Care Action

[illegible]
Action

Douglas Fraser
United Automobile Workers

Lark Green
Public Citizen

Al Grospitron
Oil, Chemical, and Atomic Workers International Union

Tom Hayden
Campaign for Economic Democracy

Lynette Lewis
Operation PUSH

Lloyd McBride
United Steelworkers of America

John Ryor
National Education Association

Tim Sampson
Citizens Action League

Jacob Sheinkman
Amalgamated Clothing and Textile Workers Union

Pat Sweeney
Northern Plains Resource Council

Bernard Veney
National Clients Council

Fritz Wiecking
Citizens Action Coalition of Indiana

Jerry Wurf
American Federation of State, County, and Municipal Employees

William Wynn
Retail Clerks International Union

Eugene Zappo
N.J. Federation of Senior Citizens

NATIONAL OFFICE

Heather Booth, Executive Director
Ken Rolling, Administrative Director
Steve Max, Field Director
Citizen/Labor Energy Coalition
600 West Fullerton
Chicago, Illinois 60614
Phone: 312/929 9126

WASHINGTON OFFICE
[illegible]

REGIONAL ORGANIZERS

NORTHEAST
Mark Dyen
Citizen/Labor Energy Coalition
304 Boylston St., 2nd Floor
Boston, MA 02116
(617) 266-7505
Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, and Maine

MIDWEST
Bob Hudek
Citizen/Labor Energy Coalition
600 West Fullerton
Chicago, IL 60614
(312) 929-9125
Illinois, Indiana, Michigan, Wisconsin, Ohio, Nebraska, Iowa, Kansas, Missouri, and Minnesota

SOUTH
Ken Dupre
850 South Fourth St.
Louisville, KY 40203
(502) 585-4076
Kentucky, Tennessee, Georgia, Florida, South Carolina, North Carolina, Alabama, Mississippi, West Virginia, and Virginia

NORTHWEST
Kari Englund
329 South Fourth, West
Missoula, MT 59801
(406) 728-6387
Washington, Oregon, Idaho, and Montana

MID-ATLANTIC
Eileen Kirlin
c/o Retail Clerks Local 1357
210 East Courtland
Philadelphia, PA 19120
(215) 457-5200, Ext. 235
New York, Pennsylvania, New Jersey, Delaware, and Maryland

MEMBER ORGANIZATIONS

(Partial Listing)

A. Philip Randolph Institute, Kansas City

Action Alliance of Senior Citizens in Greater Philadelphia

Alaska Public Interest Research Group

Aluminum Workers International Union

Amalgamated Retirees Club, Local 657

Americans for Democratic Action

Appalachian Research and Defense Fund
of A W R New York

Catholic Committee on Urban Ministry

Citizens Alliance, New York

Citizens Coalition for Tax Reform, Delaware

Coalition of Black Trade Unionists

Coalition of Labor Union Women

Coalition on Legislation for the Elderly

Commission on Racial Justice, United Church of Christ

Community Action Research Group, Iowa
[illegible]

Connecticut Citizens Action Group
Consumers Cure, Florida
Democratic Socialist Organizing Committee
Environmental Action
Environmental Action Foundation
Environmental Information Center, Montana
Environmentalists for Full Employment
Federation of Church Social Agencies, Kentucky
Florida Consumers Federation
Florida Justice and Peace Center
Georgia Action
Granite State Alliance, New Hampshire
Gray Panthers, Kansas City, Missouri
Greater Kansas City Citizen/Labor Energy Coalition
Idaho Citizens Coalition
Institute for Southern Studies
International Chemical Workers
International Longshoremens and Warehousemens Union
International Longshoremens Association
Iowa Citizen/Labor Energy Coalition
Jefferson County Council on Aging, Kentucky
Justice and Peace Center, Milwaukee, Wisconsin
Kanawha Valley Labor Council, West Virginia
Kentucky AFL-CIO
Kentucky Association for Older Persons
Kentucky Clients Council
Life of Land, Hawaii
Light Brigade, Seattle, Washington
Louisville Tenants Union
Maine Citizens for Utility Rate Reform
Maine Citizen/Labor Energy Coalition
Maine Public Interest Research Group
Massachusetts Citizen/Labor Energy Coalition
Massachusetts Public Interest Research Group
Michigan Citizen/Labor Energy Coalition
Michigan Citizens Lobby
Michigan Coalition on Utilities and Energy
Minnesota Citizens Action
Minnesota Senior Federation
Montana Senior Citizens Association
[illegible]

National Football League Players Association
Neighborhood Community Development Center, Kansas City, Mo
New American Movement
New Hampshire Citizen Labor/Energy Coalition
New Jersey Industrial Union Council, AFL-CIO
New York Peoples Power Coalition
New York Public Interest Research Group
New York Statewide Senior Action Council
North Carolina, AFL-CIO
Northern California Coalition for Full Employment
Northern Rockies Action Group
Ohio State Council of Senior Citizens
Ohioans for Utility Reform
Oregon Fair Share
Oregon Solar Lobby
Peace and Justice Center, Louisville, Kentucky
Peace and Justice Commission, North Carolina
Pennsylvania Alliance
Pennsylvania Alliance for Jobs and Energy
Pennsylvania Social Services Union, SEIU, Local 668
Peoples Alliance
Rhode Island Coalition for Consumer Justice
Seattle Ratepayers Coalition
South Carolina Public Interest Research Group
Southern Christian Leadership Conference
Southern Organizing Committee
Southerners for Economic Justice
Southwest Resource and Information Center
St. Louis Citizen/Labor Energy Coalition
Tennessee Valley Clean Energy Alliance
Tennessee Valley Consumer Coalition
United Presbyterian Church in U S A
Urban Environment Conference
Urban League of Louisville, Kentucky
Urban League of Philadelphia
Utility Consumers United Milwaukee, Wis
West Virginia AFL-CIO
[illegible]

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APPENDIX B

ENERGY ACTION

Educational Foundation, 1523 L Street, NW, Suite 302,
Washington, DC, 20005 (202) 737-6220

October 26, 1978

The Honorable Cecil D. Andrus
Secretary of the Interior
18th and C Streets, N.W.
Washington, D.C. 20240

Dear Mr. Secretary:

On September 29, 1978, the Department of the Interior announced that Sale #65 in the Eastern Gulf of Mexico would be the first sale held under the new Outer Continental Shelf Lands Act Amendments signed into law by President Carter on September 18, 1978. One of the findings of this new law declares that "the Outer Continental Shelf contains significant quantities of oil and natural gas and is a vital national resource reserve which must be carefully managed so as to realize fair value, to preserve and maintain competition, and to reflect the public interest."

Similarly, two important purposes of the Act are to "insure the public a fair and equitable return on the resources of the Outer Continental Shelf, and . . . preserve and maintain free enterprise competition." To achieve these purposes, Congress requires the Secretary to use bidding systems other than the fixed royalty cash bonus system for a minimum of 20% and a maximum of 60% on all areas offered for lease each year. This reflected a congressional intention for a substantial shift away from the old systems to new systems. As stated in the Senate Energy and Natural Resources Committee's Report, (June 21, 1977), "The basic thrust of all these new options is to reduce the reliance on large front-end cash bonuses as the means of obtaining a fair price for the public's property."

Moreover, in providing reasons (as required by the new Act) as to why the sliding scale royalty system was

chosen for 22 tracts, in Sale #65, the Department itself stated, "This is intended to reduce bonuses, which should improve competition for leases" (Federal Register, Vol. 43, No. 190, September 29, 1978, p. 44896)—clear recognition that the fixed royalty cash-bonus bidding system has frustrated competition.

Yet, in Sale #65 only about 25% of the tracts will be offered on the basis of a cash bonus bid with a sliding scale royalty. The remaining 75% of the tracts will be leased on the basis of the cash bonus fixed royalty system, a system which has been shown to restrict competition and deprive the public of fair market value. Even prior to the passage of the OCS Lands Act Amendments of 1978, in Sale #CI and Sale #43, the Department offered one-third of the tracts under an alternative to the fixed royalty cash bonus system. Thus, instead of increasing the portion of tracts to be offered on the basis of alternative systems, the Department has reduced the percentage! This is not only an attempt to frustrate the intention of Congress, but also an open admission by the Department that it is unwilling to take available steps to maximize competition and obtain fair value for the public's OCS resources.

We hereby adopt by reference with request to sale #65 our previous correspondence to you (our letters of January 23, March 24, March 30, April 12, April 20, and May 9, 1978) relating to previous sales, and hereby formally notify you that for the reasons stated in the above mentioned letters, and in light of the failure to correct the serious legal flaws, information gaps, procedural failures and violations of trustee responsibility, we consider any leases let under this system to be presumptively illegal, beyond the power of the Department to confer, and potentially the product or result of reckless nonfeasance by the Department's officials and/or a continuing conspiracy by the oil industry and others to deprive the federal government of valuable public resources without adequate compensation. In addition the new law adds to or makes explicit responsibilities that we believe

existed under prior laws, and thus provides additional grounds for concluding that the Department is not fulfilling its legal responsibilities.

For example, in previous correspondence we have pointed out that the Department of Energy Organization Act requires the Secretary of Energy "to prescribe regulations" which relate to "fostering of competition for Federal leases" and other provisions. Such regulations have never been promulgated and constitute a preexisting legal flaw in past leases. Now the OCS Lands Act Amendments explicitly require (Section 205(c)(1)) a competitive review by the Department of Justice and the Federal Trade Commission, yet in the absence of DOE regulations, there are no standards or procedures for this vital review process, thus voiding both the review process and the leases to which it applies.

We urge you therefore to postpone Sale #65 scheduled for October 31, 1978 in New Orleans, Louisiana until the leasing arrangements can be brought into full compliance with your legal and fiduciary responsibilities. Failing this we request you forthwith to notify all qualified bidders for that sale, either directly or through an immediate Federal Register notice, that this claim of presumptive invalidity of the proposed leases has been made, and may operate to vitiate some or all of purported leasing agreements if the Department or a court ultimately sustains some or all of the bases for the claim. Although we believe that Section 23 of P.L. 95-372 has no application to our claims of illegality either under previous law or P.L. 95-372, to the extent § 23 may be construed to be applicable to us or others making similar claims, this letter should be deemed to be a notice on our behalf and on behalf of those who may assert similar positions for the purposes of § 23.

Sincerely,

/s/ James F. Flug
JAMES F. FLUG
Director and Counsel

cc: Robert Kalter, Director Leasing Programs, Department of Energy
Barbara Heller, Deputy Under Secretary

I hereby affirm under oath that the facts and conclusions stated herein are true to the best of my knowledge and belief.

/s/ James F. Flug
JAMES F. FLUG

/s/ Linda A. Dryden
LINDA A. DRYDEN

My Commission Expires
May 14, 1981

ENERGY ACTION
Educational Foundation, 1523 L Street, N.W., Suite 302
Washington, DC, 20005 (202) 737-6220

December 13, 1978

The Honorable Cecil D. Andrus
Secretary of the Interior
18th and C Streets, N.W.
Washington, D.C. 20240

Dear Mr. Secretary:

On November 13, 1978 the Department of the Interior announced that Sale #51 in the Western and Central Gulf of Mexico was to be the second sale held under the new Outer Continental Shelf Lands Act Amendments. The first sale to be conducted under the new Act, Sale #65, demonstrated that even under new authority, the Department has continued to rely on outmoded, ineffective methods which do not assure adequate competition and the receipt of fair market value as explicitly required by the OCS Lands Act Amendments. This conclusion is obvious from an analysis of Sale #65.

The Department in Sale #65 offered 89 tracts estimated to contain "between 15 and 150 million barrels of oil and 20-175 billion cubic feet of natural gas" (FEIS, p. I-1, Vol. 1). Yet, except for two tracts, all of the tracts bid on were evaluated by the U.S. Geological Survey to contain little or no oil or gas resources. 33 of the 35 tracts bid on by the companies were evaluated by the Survey at the minimum value ($25/acre or $144,000 per standard 5,760 acre tract). In addition, the information used by the Survey to make its estimates was of very low reliability. Indeed, the industry had as much confidence in the value of the tracts put up for bid as did the Department. This is clear from an analysis of the bidding patterns. Of the 89 tracts offered, 54 received no bids, 20 received 1 bid, nine received 2 bids,

three received 3 bids, one received 4 bids, one received 5 bids and one received 6 bids. Thus, the average number of bids for all tracts offered was 0.7 bids per tract and the average for all tracts bid on was 1.8 bids per tract.

This sale also witnessed the continuing presence of joint venture arrangements led by major companies (Mobil/Amerada Hess; Shell, Cities Service and Sun; Chevron/Southern Natural, etc.). Because of these joint venture arrangements, eight potential bidders were eliminated, so that instead of 15 bidders there were actually only seven. It is also important to note that the major-led joint ventures tended to avoid bidding on the sliding-scale royalty tracts and concentrated most of their effort on the low fixed royalty high bonus bid tracts. In addition to the small number of bidders (lack of competition for OCS tracts) and other potential competitive problems (impact of granting of leases on competition in relevant markets), the lack of knowledge of the potential resources in the lease area (as evidenced by the large number of minimum evaluations and the fact that the average bid exceeded the average evaluation by nearly 950%) can only result in the public's not receiving fair market value for its resources as well as in the misdirection of industry capital.

In a News Release dated November 16, 1978, the Department announced acceptance of all the bids, but there was no mention that the Secretary had made a determination with regard to the competitive review mandated by the OCS Lands Act Amendments (Sec. 205(b)(3)). Although the Department of Justice did not conduct a competitive review (see letter dated October 24, 1978) and even though the Justice Department did not consult with the Federal Trade Commission, a determination by the Secretary must still be made.

Since Sale #51 is being conducted in the same general area in which Sale #47 was conducted in June 1977, it is important to understand some of the results that have already been reported from the drilling of

tracts from that sale. In an *Oil and Gas Journal* article entitled, "Success Ratio High on June '77 Leases in Gulf," (10/30/78), it was reported that:

> Operators haven't encountered any surprises. They generally have either found what their sophisticated exploration programs indicated was there in deeper waters or they have drilled discoveries in highly developed shallow-water areas.

Indeed, on the 29 tracts listed by the *Journal* the total amount bid was a little more than $501 million versus a U.S.G.S. evaluation of just over $60 million, 8½ times what was bid. Thus, even in an area where the greatest amount of information exists, the U.S.G.S. has been incapable of assuring the public fair market value in its pre-lease evaluations.

We hereby adopt by reference with respect to Sale #65 our previous correspondence to you (our letters of October 28 & 31, 1977, December 9, 1977, January 23, March 24, March 30, April 12, April 20, May 9, and October 26, 1978) relating to previous sales, and hereby formally notify you that for the reasons stated in the above-mentioned letters, and in light of the failure to correct the serious legal flaws, information gaps, procedural failures and violations of trustee responsibility, we consider any leases let under this system to be presumptively illegal, beyond the power of the Department to confer, and potentially the product or result of reckless nonfeasance by the Department's officials and/or a continuing conspiracy by the oil industry and others to deprive the federal government of valuable public resources without adequate compensation. In addition the new law adds to or makes explicit responsibilities that we believe existed under prior laws, and thus provides additional grounds for concluding that the Department is not fulfilling its legal responsibilities.

For example, in previous correspondence we have pointed out that the Department of Energy Organization Act requires the Secretary of Energy "to prescribe regu-

lations" which relate to "fostering of competition for Federal leases" and other provisions. Such regulations have never been promulgated and constitute a preexisting flaw in past leases. Now the OCS Lands Act Amendments explicitly require (Section 205(c)(1)) a competitive review by the Department of Justice and the Federal Trade Commission, yet in the absence of DOE regulations, there are no standards or procedures for this vital review process, thus voiding both the review process and the leases to which it applies.

We urge you therefore to postpone Sale #51 scheduled for December 19, 1978 in New Orleans, Louisiana until the leasing arrangements can be brought into full compliance with your legal and fiduciary responsibilities. Failing this we request you forthwith to notify all qualified bidders for that sale, either directly or through an immediate Federal Register notice, that this claim of presumptive invalidity of the proposed leases has been made, and may operate to vitiate some or all of purported leasing arrangements if the Department or a court ultimately sustains some or all of the bases for the claim. Although we believe that Section 23 of P.L. 95-372 has no application to our claims of illegality either under previous law or P.L. 95-372, to the extent that Section 23 may be construed to be applicable to us or others making similar claims, this letter should be deemed to be a notice on our behalf and on behalf of those who may assert similar positions for the purposes of Section 23.

Sincerely,

/s/ Edwin Rothschild
EDWIN ROTHSCHILD
Research Director

cc: Robert Kalter, Director, Leasing Programs,
Department of Energy
Barbara Heller, Deputy Under Secretary,
Department of the Interior

I hereby affirm under oath that the facts and conclusions stated herein are true to the best of my knowledge and belief.

/s/ Edwin Rothschild
EDWIN ROTHSCHILD
Research Director

/s/ Linda A. Dryden
LINDA A. DRYDEN
My Commission Expires
May 14, 1981

ENERGY ACTION

Educational Foundation, 1523 L Street, NW, Suite 302,
Washington, D.C. 20005 (202) 737-6220

December 29, 1978

The Honorable Cecil D. Andrus
Secretary of the Interior
18th and C Streets, N.W.
Washington, D.C. 20240

Dear Mr. Secretary:

In February 1979, the Department of the Interior intends to hold Sale #49 in the Mid-Atlantic region. Included in this proposed sale are tracts which are adjacent to tracts leased in Sale #40 as well as tracts which are to the northeast and southwest of the tracts leased in Sale #40. When you first announced the present five-year leasing plan, you stated:

> There is an approximate three-year interval between the first sales in a frontier area and subsequent sales in the same geologic province.

and that

> . . . this interval would provide for an orderly level of activity for both exploration and development and permit the use of exploratory results from one sale in making tract selections for a later sale. (News Release, 8/23/77)

Because acceptance of the bids was delayed by legal action, drilling in the leased area did not begin until March 29, 1978. Thus, by the time of Sale #49, less than a year will have elapsed between the beginning of drilling and the date of the proposed sale. Clearly, this amount of time is not sufficient for the collection of adequate data on which to base evaluations for Sale #49.

On November 8, 1978, you announced your intention to allow oil companies "to drill pre-lease test wells on

the Outer Continental Shelf directly on geologic structures that could contain oil or natural gas." At that time it was announced by Dr. G. William Menard, Director of the U.S. Geological Survey, that "proposed revisions to existing regulations will be published in the *Federal Register*, with adequate time for public review and comment." As of today there has been no such notice published in the *Federal Register*. Therefore, since many of the proposed tracts for Sale #49 are in areas where there has been no pre-lease exploratory drilling, and since with additional time on-structure stratigraphic wells could be drilled, the Department has sufficient reason to wait until the regulations are in place and such wells are permitted before tracts are leased.

It is also our view that there exists a conspiracy by the oil companies to defraud the government and restrain competition in their bidding for OCS leases. The companies have stated repeatedly that the Government, not the industry, collects the lion's share of revenue from the production of oil and gas from the OCS when in fact the opposite is true. Secondly, various joint venture agreements and agreements between potential joint bidders tend to restrict potential competitors from bidding in certain OCS regions. This conspiracy results in a diminution of competition for OCS tracts which in turn deprives the public of fair market value for its resources.

We hereby adopt by reference with respect to sale #49 our previous correspondence to you (our letters of January 23, March 24, March 30, April 12, April 20, and May 9, October 26, December 13, 1978) relating to previous sales, and our testimony at the Department's E.I.S. hearing on Sale #49 at Atlantic City on June 28, 1978, and hereby formally notify you that for the reason above, for the reasons stated in the above-mentioned letters and testimony, and in light of the failure to correct the serious legal flaws, information gaps, procedural failures and violations of trustee responsibility, we consider any leases let under this system to be presump-

tively illegal, beyond the power of the Department to confer, and potentially the product or result of reckless nonfeasance by the Department's officials and/or a continuing conspiracy by the oil industry and others to deprive the federal government of valuable public resources without adequate compensation.

We urge you therefore to postpone Sale #49 until the leasing arrangements can be brought into full compliance with your legal and fiduciary responsibilities including but not limited to completion of the initial drilling program on the Sale #40 leases and issuance and implementation of the on-structure drilling regulations. Failing this we request you forthwith to notify all qualified bidders for that sale, either directly or through an immediate Federal Register notice, that this claim of invalidity of the proposed leases has been made, and may operate to vitiate some or all of purported leasing agreements if the Department or a court ultimately sustains some or all of the bases for the claim. Although we believe that Section 23 of P.L. 95-372, to the extent § 23 may be construed to be applicable to us or others making similar claims, this letter should be deemed to be a notice, for the purposes of § 23, on our behalf and on behalf of those who may assert similar positions with respect to Sale #49 or future sales.

Sincerely,

/s/ James F. Flug
JAMES F. FLUG
Director & Counsel

/s/ Edwin Rothschild
EDWIN ROTHSCHILD
Research Director

We hereby affirm under oath that the facts and conclusions stated herein are true to the best of our knowledge and belief.

/s/ James F. Flug
JAMES F. FLUG

/s/ Edwin Rothschild
EDWIN ROTHSCHILD

District of Columbia: ss

I, Barbara H. Holden, Notary Public in and for the District of Columbia, do hereby certify that James F. Flug and Edwin Rothschild both appeared before me personally and signed the above letter this 29th day of December, 1978.

[SEAL]

/s/ Barbara H. Holden
Notary Public
My Commission Expires
January 31, 1980

APPENDIX C

STATE LANDS COMMISSION

[SEAL]

May 4, 1979

The Honorable Cecil D. Andrus
Secretary of the Interior
U. S. Department of the Interior
Washington, D.C. 20240

Dear Secretary Andrus:

Pursuant to Section 23 of the Outer Continental Shelf (OCS) Lands Act, as amended, (the Act) I hereby notify you, in writing under oath, on behalf of the California State Lands Commission, of our belief that various provisions of the Act are being and will be violated in the proposed Lease Sale 48 currently scheduled to be held in June 1979. These violations jeopardize the validity of proposed Lease Sale 48.

Section 18(a)(4) of the Act states that:

> "(4) Leasing activities shall be conducted to assure receipt of fair market value for the lands leased and the rights conveyed by the Federal Government." (See also Section 102(2)(c)).

Yet, it is our understanding that the bidding on Lease Sale 48 will largely be conducted on a cash-bonus low-royalty basis. That system, contrary to the terms and policies of the OCS Act, confers rights to federal oil and gas at less than fair value, inhibits competition in the sale of leases and in the production of oil and gas, (see Section 102(2)(d)), encourages the hoarding rather than the full exploitation of oil and gas resources, (see Section 102(1), (2)(a)), and, without greater information about the prospects for recovery, is inconsistent with

responsible management of the nation's public resources. (See Section 3(3)).

It is our belief that, to provide a full opportunity to obtain fair value and to meet the other requirements of the Act, the Secretary must have available to him for his consideration and use, all of those forms of competitive bidding specified in Section 8(a)(1)(A)-(G) of the Act. Indeed, Section 8(a)(1) requires that bidding be conducted "under regulations promulgated in advance", and Section 8(a)(6) of the Act requires that rules for bidding systems involving the calculation of net profits be established at least ninety days before the notice of any lease sale using those systems.

To our knowledge and belief, no regulations have been established pursuant to Section 8(a)(6) of the Act. As a result of this fact and the proposed timing of Lease Sale 48 (June 1979), the Secretary is precluded from the consideration and use of the systems specified in subparagraphs (D), (E), or (F), which under prudent administration would assure the receipt of fair market value, and perhaps other subparagraphs as well. To conduct a lease sale pursuant to cash-bonus low-royalty bidding, without any opportunity to consider other bidding systems that may satisfy or better serve the requirements of the Act, is a serious abuse of discretion and a violation of the Act.

Secondly, the Secretary has not fully complied with the provisions of Section 8(g) of the Act with respect to either of Lease Sales 48 and 53 scheduled for the California OCS. To our knowledge and belief, the Governor of the State of California has not received the material specified in Section 8(g)(1)(B), (C), and (D), nor was he given the opportunities specified in the first portion of Section 8(g)(2), even though the law became effective in September 1978. Further, while the Secretary did provide, via letter dated March 30, 1979, an offer to enter an agreement pursuant to Section 8(g)(2), the validity of that offer must be questioned because

the Secretary has not complied with the conditions precedent as previously specified. Even if that were not the case, the timing of the communication was such that the Governor is not afforded a full ninety days, as authorized by Section 8(g)(3), to respond and is allowed no time for negotiation of terms prior to the scheduled Lease Sale 48 (June 1979). While the Governor may be able to respond within the sixty days requested by the Secretary as to whether an agreement in concept is possible, he is restricted in his ability to negotiate by the lack of information, which should have been furnished pursuant to Section 8(g)(1)(B). One of the major reasons for the provision of such information is to enable the State to make an independent evaluation regarding the location and extent of common pools and to enter into an agreement(s) under this Section with knowledge equal to that of the Federal Government.

Furthermore, if the State and the Secretary cannot enter into a unitization agreement, the provisions of 8(g)(3) and (4) might appear to allow the Federal Government to drain and sell State oil and gas pursuant to the terms of a federal lease. There is more than a substantial risk that under the lease terms which can be available for this sale, the State will thus be denied fair value for its oil and gas.

Finally, Section 5(b) requires that:

> "(b) The issuance and continuance in effect of any lease, or of any assignment or other transfer of any lease, under the provisions of this Act shall be conditioned upon compliance with regulations issued under this Act."

It is our belief that inherent in this Section is the requirement that such regulations be in effect at the time of any lease issued subsequent to the amendments to the Act. Notable among the regulations specified in Section 5(a)(1)-(8), which have yet to be issued in final form, are those "for compliance with the national

ambient air quality standards pursuant to the Clean Air Act". Based on our interpretation of Section 5(b), the Secretary would be in violation of the provisions of the Act if any leases, specifically those which would result from Lease Sale 48, were issued prior to the issuance of regulations, as enumerated above, in their final form.

It is our belief that, speculating that such is not the case, industry will be loath to risk too much capital in the acquisition of leases which are burdened with as yet to be determined regulations, particularly with regard to air quality and the specter of trade-offs, which would diminish the nature and extent of their economic return. Such a "cloud" over the leases to be issued would thus inhibit the Secretary's charge "to assure receipt of fair market value for the lands leased and the rights conveyed by the Federal Government". This, in our opinion, would constitute a further violation of the provisions of Section 18(a)(4) of the Act.

The objections which we have made in this letter are not intended to be exclusive and we specifically reserve the right to make amendments as necessary.

Sincerely,

/s/ James F. Trout
JAMES F. TROUT
Assistant Executive Officer

STATE OF CALIFORNIA)
)
COUNTY OF SACRAMENTO)

On this 4th day of May, 1979, before me, Diane R. Jones, Notary Public, State of California, duly commissioned and sworn, personally appeared Mr. James F. Trout, Assistant Executive Officer of the State Lands Commission, known to me to be the person whose name is subscribed to the attached document, and acknowledged to me that he executed the attached document and under duly administered oath did furthermore swear to the truth of his statements in the attached document.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal in the County of Sacramento.

/s/ Diane R. Jones
Notary Public
In and for the
State of California

[SEAL]

APPENDIX D

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

STATE LANDS COMMISSION OF CALIFORNIA;
ENERGY ACTION;
THE CITY OF LONG BEACH, CALIFORNIA; ET AL.

v.

UNITED STATES, ET AL.

DISTRICT OF COLUMBIA)
) ss.
CITY OF WASHINGTON)

AFFIDAVIT OF GEORGE L. DONKIN

The affiant, GEORGE L. DONKIN, having been duly sworn, states as follows:

My name is George L. Donkin. I am Vice President and Director of Petroleum Studies of J.W. Wilson & Associates, Inc. J.W. Wilson & Associates, Inc. is an economic consulting firm specializing in energy economics, public utility regulation, antitrust analysis and economic research. A summary of my professional experience and qualifications is attached as Exhibit 1 to this Affidavit.

A large portion of the United States' undiscovered crude oil and natural gas resource base is in the offshore areas of the Outer Continental Shelf (OCS). For example, the U.S. Geological Survey estimates that 37.1 percent of our undiscovered recoverable oil resources and 22.1 percent of our undiscovered recoverable natural gas resources will ultimately be found and produced from offshore areas of Alaska, the Gulf of Mexico and the Pacific and Atlantic Coastal States.*

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* *Geological Estimates of Undiscovered Recoverable Oil and Gas Resources in the United States*, Geological Survey Circular 725, 1975.

Since 1954, leasing of federal OCS oil and gas properties has been conducted by the Department of the Interior. Until recently, all OCS oil and gas leases were sold pursuant to fixed, one-sixth royalty provisions with each lease being awarded to the bidder submitting the highest acceptable bonus payment at the time of the lease sale.

During the period 1954-1970, OCS leasing and production activity was concentrated primarily in the Gulf of Mexico, which today represents one of the Nation's most prolific oil and natural gas producing basins. During the 1970's however, federal leasing activity accelerated and offshore areas in Alaska and Atlantic Coastal regions have been opened up to exploratory drilling in the search for oil and gas.

It was also during this post 1970 period that wellhead prices for crude oil and natural gas rose dramatically above historical levels. For example, in 1970 the average production value of OCS crude oil was $3.30 per barrel and the average price for OCS natural gas was 18.1 cents per thousand cubic feet (Mcf). By 1977, crude oil prices for OCS leases sold in 1973 had risen to $11.49 per barrel and the average gas price for 1973 leases was $1.42 per Mcf. Moreover, as a result of the Natural Gas Policy Act of 1978 and recent events in world crude oil markets, the real wellhead value of OCS oil and gas production will continue to escalate rapidly through the 1990's and into the next century.

Because substantial production has already taken place from Gulf of Mexico OCS leases sold during the period 1954-1970, it is possible to analyze the effective government share, in the form of royalty payments and lease bonuses, of the total production value for that group of leases. However, is should be recognized that a large portion of the oil and gas produced from 1954-1970 leases took place at historical price levels which were well below the prices which will be received for future production

from both 1954-1970 leases and leases sold subsequent to 1970.

The effective government share of the value of OCS oil and gas production is the percentage derived from combining up-front bonuses received at the time of the lease sale with subsequent government royalty receipts and then dividing that amount by the total value of all oil and gas produced from the relevant group of leases. In essence, this computation results in an effective "adjusted" royalty payment to the government. This calculation should take into account two significant economic factors—inflation and the time value of money. This is because the lease bonuses are received in advance of production and royalties; hence, at any point in time the true value of lease bonuses received in the past is in excess of the nominal value of bonus payments associated with that production. Therefore, to the extent that inflation (or deflation) has occurred in the economy over a period of time, lease bonus payments should be adjusted upward (or downward) to reflect changes in the real value of the dollar between when the bonuses were received by the government and when the calculation of the government's "adjusted" royalty is being made.

A similar adjustment to the nominal bonus payments is necessary to reflect the time value of money. This is so because even if no inflation were to exist, one dollar today is worth more than one dollar to be received ten years from today. The appropriate method for taking into account the time value of money for a revenue stream to be received over a number of years is to express all dollars in constant dollars (i.e. adjust for the effects of inflation) and then to discount future revenues and inflate revenues received in the past by the real rate of interest, or discount rate, which is approximately 3.0 percent.

Exhibits 2 through 6 represent calculations of the effective government share of the value of production from Gulf of Mexico OCS leases sold between 1954 and 1970

and for all OCS leases sold during the period 1971 through 1977.

Exhibit 2 summarizes the bonus payments to the government for each group of leases, in nominal dollars, in constant 1978 dollars, and the present value of those bonuses in 1978 dollars. The nominal dollars computations simply reflect the addition of all government bonuses received during the indicated years. The constant dollars computations were made by applying the applicable implicit Gross National Product deflator to the nominal bonus payments received. The present value of the bonuses, in constant 1978 dollars, was calculated by inflating the value of the bonuses in constant 1978 dollars by 3.0 percent per year for the number of years between when the bonuses were received and 1978.

Exhibit 3 summarizes estimated production from Gulf of Mexico OCS leases sold during the period 1954-1970. Actual production, as reported by the U.S. Geological Survey (USGS), was used for the period 1955-1976. USGS estimates for 1977-2010 production from leases acquired during 1954-1969 were also adopted in the preparation of Exhibit 3.* Production decline analysis was used to project future production from Gulf of Mexico OCS leases sold in 1970.

Exhibit 4 summarizes the effective government share of total production revenues from leases acquired in 1954-1970. In nominal dollars, this adjusted royalty is only 21.2 percent. When the effects of inflation during the period 1954-1978 are taken into account, the government's share rises to 27.8 percent. When the present value in 1978 dollars, of bonus payments and royalties received over the 1954-2010 period is recognized. The Department of Interior's Final Environmental Impact Statement for OCS Sale 48 contains the following daily production estimates for the acreage originally proposed to be offered in that sale:

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* U.S. Geological Survey, Applied Research and Analysis Section, Report No. 79-8, November 27, 1978.

	Oil In 1000 Bbl./Day	Gas In MMcf/Day
1982	13.7	16.4
1983	57.5	69.6
1984	118.9	143.0
1985	187.7	225.8
1986	219.7	264.4
1987	216.0	259.7
1988	185.0	222.5
1989	147.0	177.0
1990	115.4	138.6
1991	92.4	111.0
1992	77.6	93.2
1993	67.8	81.4
1994	60.3	72.6
1995	54.3	65.2
1996	49.5	59.7
1997	45.5	54.8
1998	42.0	50.4
1999	39.3	47.1
2000	36.5	43.8

These production forecasts derived from recoverable resource estimates of 715 million barrels of oil and 860 billion cubic feet of gas. Subsequent to the issuance of the FEIS for Sale 48, a number of tracts were removed from the original list of leases to be offered. This resulted in the Department reducing its estimate of recoverable resources for the sale area to 104 million barrels of oil and 498 billion cubic feet of gas. However, no revised annual production forecast for the proposed sale area has been issued by the Department.

Exhibit 10 summarizes estimated annual production, production values between 1982 and 2000, and the value of government royalties for the 73 leases to be offered in Sale 48 pursuant to fixed, one-sixth royalty provisions. This exhibit was prepared by assuming that:

- The revised recoverable resource estimate for Sale 48 bears the same relation to production volumes

over time as did the original recoverable resource estimate to the production schedule contained in the FEIS for Sale 68; and

- Ultimate recoverable resources are uniformly distributed over the 148 remaining leases in the sale area.

Given these two assumptions, it is possible to estimate the total value of the royalties to be paid to the government, in constant 1978 dollars, from fixed, one-sixth royalty leases between 1982 and 2000. As shown in Exhibit 10, this figure approximates $267 million.

The Department of the Interior has estimated that the internal rate of return (IROR) earned by the oil and gas producing industry on all Gulf of Mexico leases sold during the years 1954-1969 ranges between 9.45 percent and 11.6 percent.* The 9.45 percent IROR estimate derives from a "middle regulation" product selling price scenario and the higher 11.6 percent IROR estimate was calculated under a "deregulation" product selling price scenario.

In my view, these rate of return estimates are totally inadequate as indicators of the actual returns that will be earned by the petroleum industry over the life of the productive leases acquired between 1954 and 1969. Moreover, and indeed far more importantly, irrespective of the actual rate of return earned on pre-1970 leases, those leases do not provide reasonable indicators of profitability for leases sold subsequent to 1969. This is because the bulk of the oil and gas resources located on pre-1970 leases was produced prior to the dramatic increases in oil and gas prices which took place after 1972.

In the absence of actual company drilling and operating cost data and reliable oil and gas reserves estimates, it is simply not possible to calculate with accuracy the

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* U.S. Geological Survey, Applied Research and Analysis Section, Report No. 79-8.

internal rate of return over the productive life for all OCS leases sold during the years 1954-1969. It is my understanding that the Department of the Interior IROR estimates derive from aggregated published drilling cost data from unduly conservative production forecasts based upon an extrapolation of recent production levels into the future. Moreover, future costs can only be estimated and therefore become subject to a wide degree of uncertainty. Thus, the Department's estimates of IROR on pre-1970 leases cannot be viewed as reflective of actual rates of return on that group of leases.

In addition, the Department's selection, for purposes of calculating the IROR on OCS operations, of pre-1970 leases is as previously stated, much of the ultimate production from that group of leases took place at low historical price levels. Second, by arbitrarily omitting the leases sold in 1970, for which the same amount and quality of data were readily available at the time the estimates were made, a significant downward bias in the ultimate IROR estimate was incorporated in the analysis. This is because it is widely recognized—both within and outside the petroleum industry—that the tracts leased in the December 15, 1970 OCS lease sale represent one of the most productive and profitable groups of leases ever sold by the Department. To illustrate, consider the following comparison:

	Value of Products Sold In Millions of Dollars	
	1969 Leases	1970 Leases
1970	$1.8	—0—
1971	7.3	2.0
1972	27.8	14.8
1973	42.3	210.0
1974	62.0	569.6
1975	63.6	972.9
1976	61.8	1,118.4
	$266.6	$2,887.7

There is simply no logical or reasonable basis for including leases sold in 1969—for which seven years of production history were available when the analysis was conducted—and not including leases sold in 1970—for which only one less year of production history was available—given the knowledge that $2.6 billion of additional revenues were associated with the group of leases omitted.

Lastly, most oil and gas production from the leases sold after 1969 will be priced at high world market prices, as opposed to the low prices associated with production from pre-1970 leases. In view of the pricing and output decisions of the Organization of Petroleum Exporting Countries and the rapid escalation of domestic oil and gas prices in this country, there is no meaningful relationship between the profitability associated with pre-1970 OCS leases and the profitability that will ultimately be realized on leases sold after 1969.

Exhibits 1 through 10 attached hereto.

DATED this 20th day of June, 1979.

/s/ George L. Donkin
GEORGE L. DONKIN

DISTRICT OF COLUMBIA)
) ss.
CITY OF WASHINGTON)

Subscribed, sworn to and acknowledged before me, a Notary Public in and for the State and City aforesaid, by George L. Donkin, on this 20th day of June, 1979.

/s/ Beth L. Fowler
Notary Public

My Commission Expires
February 14, 1984

EXHIBIT 1

QUALIFICATIONS OF GEORGE L. DONKIN

George L. Donkin is Vice President and Director of Petroleum Studies of J. W. Wilson & Associates, Inc.

Mr. Donkin holds a B.A. in economics from the University of Maryland and a M.A. in economics from that same university. He has been concerned with energy economics since 1970, when he became employed as an industry economist at the Federal Power Commission (now the Federal Energy Regulatory Commission).

From 1970 through September 1972, Mr. Donkin worked in the Area Rate Division of the FPC's Bureau of Natural Gas. This work related to various aspects of natural gas producer regulation, including analyses of gas production costs and the costs of finding and producing new natural gas and crude oil.

In September 1972, Mr. Donkin transferred to the Division of Economic Studies within the FPC's Office of Economics. His principal responsibilities there related to various phases of natural gas industry regulation.

In February 1974, Mr. Donkin became an independent economic consultant under a one-year contract with Cornell University. Much of his work during that year involved an analysis of the market structure of the petroleum and natural gas industries.

In February 1975, Mr. Donkin and others formed J. W. Wilson & Associates, Inc. Since the formation of J. W. Wilson & Associates, Inc., Mr. Donkin has undertaken numerous studies on behalf of federal, state and municipal governments, private enterprise, trade associations and nonprofit organizations on economic issues and problems in the general field of energy resources, transportation and utilization. These research projects have included the supply, transmission and distribution of energy; demand characteristics; cost characteristics; price structures; interfuel competition; and

regulatory policy; with particular emphasis upon petroleum and natural gas. A number of these studies have pertained to regulatory, antitrust and arbitration proceedings, and have been submitted as expert witness testimony in U.S. regulatory and court cases, and Congressional proceedings.

In February 1975, Mr. Donkin was appointed by the Chairman of the FPC to the Technical Advisory Task Force on Prospective Exploration and Development and Additions to Reserves of the National Gas Survey.

Mr. Donkin is a member of the International Association of Energy Economics.

The following is a summary of Mr. Donkin's expert testimony since 1973.

Before the Federal Power Commission and the Federal Energy Regulatory Commission:

In FPC Docket No. CI73-293, et al., testimony on behalf of Staff on the rate of development of offshore Louisiana oil and gas leases sold in the December 15, 1970 Federal lease sale.

In FPC Docket No. CP74-192, testimony on behalf of eight Florida cities on the extent and results of exploratory and developmental drilling activity in onshore and offshore areas of the Texas and Louisiana Gulf Coast producing areas.

In FPC Docket No. RP75-79, testimony on three occasions on behalf of eight Florida cities on economic issues relating to natural gas curtailment policies during periods of supply inadequacy.

In Docket No. RM77-13, testimony on behalf of the American Public Gas Association and the Consumer Advocate of the State of Pennsylvania on factors affecting the cost of finding and producing new natural gas supplies.

In Docket No. OR78-1, testimony on behalf of the Arctic Slope Regional Corporation dealing with competitive issues and the relationship of the undiscovered onshore and offshore crude oil resource base in North Alaska to tariff levels on the Trans-Alaska Pipeline System.

In Docket Nos. CP78-391, et al., testimony on behalf of the Ohio Consumers' Counsel on the extent to which a national need exists for supplemental coal gas supplies. This testimony dealt with the costs associated with conventional and non-conventional alternatives to gas supplies gasified from coal.

Before the Department of Energy:

Testimony on behalf of the Energy Policy Task Force of the Consumers' Federation of America on the competitive structure of the domestic petroleum industry and the need to monitor and/or regulate the price of No. 2 home heating oil.

Before the Michigan Public Service Commission:

Testimony on behalf of the Michigan Attorney General on the appropriate level of future annual natural gas sales to be used in establishing retail rates for Michigan Consolidated Gas Company.

Before the Ohio Public Utilities Commission:

Testimony on behalf of the Ohio Consumers' Counsel on policy concerning new gas customer additions and new loads for existing gas customers.

Before the United States District Court for the Eastern District of New York:

Testimony in 1976 and 1977 on behalf of the Counties of Nassau and Suffolk on the inadequacies in the U.S. Department of the Interior's assessment of the onshore and offshore resource base and an analysis

of the probable benefits and costs associated with crude oil and natural gas production from the Mid-Atlantic Outer Continental Shelf.

Before the United States Congress:

Testimony on matters relating to the structure of the U.S. oil and gas industries and offshore oil and gas producing operations before: Senate Committee on Judiciary, Subcommittee on Antitrust and Monopoly (October 1973); House Committee on Interstate and Foreign Commerce (March 1974); House Ad Hoc Select Committee on Outer Continental Shelf (November 1975); House Committee on Interstate and Foreign Commerce (February 1977); and House Committee on the Interior, Subcommittee on Mines and Mining (February 1977).

EXHIBIT 2

Summary Of Acreage Leased And Present Value Of Bonuses Received By The Government, 1954-1977

Year	Gulf of Mexico Leases: Number Of Leases	Gulf of Mexico Leases: Acreage	Bonuses In Thousands Of: Nominal Dollars	Bonuses In Thousands Of: Constant 1978 Dollars	Present Value 1978 Dollars
1954	109	461,870	$ 139,735	$ 356,045	723,766
1955	121	402,567	108,529	270,671	534,193
1959	42	171,300	89,747	202,200	354,559
1960	147	704,526	282,642	626,052	1,065,812
1962	420	1,924,535	489,481	1,055,321	1,693,480
1964	23	32,673	60,341	126,233	190,939
1966	41	139,773	188,011	372,450	531,025
1967	158	744,456	510,079	981,902	1,359,182
1968	126	570,986	743,768	1,370,021	1,841,194
1969	36	108,658	110,945	194,598	253,906
1970	138	598,540	945,065	1,573,281	1,992,985
1954-1970	1,361	5,859,974	$ 3,668,343	$ 7,128,774	$10,541,941
	All OCS Leases				
1971	11	37,222	$ 96,304	$ 152,540	$ 187,605
1972	178	826,195	2,251,348	3,424,075	4,088,525
1973	187	1,032,570	3,082,463	4,431,113	5,136,875
1974	356	1,762,158	5,022,861	6,584,442	7,410,847
1975	321	1,679,877	1,088,133	1,301,566	1,422,256
1976	246	1,277,936	2,242,898	2,550,257	2,705,568
1977	211	1,100,741	1,568,565	1,684,648	1,735,187
1971-1977		7,761,699	$15,352,572	$20,128,641	$22,686,863

Source: *Outer Continental Shelf Statistics*, Department Of the Interior, U.S. Geological Survey, 1977.

EXHIBIT 3

Estimated Total Oil And Gas Production, In Energy Equivalent Per Acre, From Gulf of Mexico OCS Leases Sold In 1954-1970

	1955-1976	1977-2010	1955-2010	Acreage Sold In 1,000 Acres	Oil & Gas Production Per 1,000 Acres Sold
(a) Quadrillion Btu	34.7	24.5	59.2	5,860	.0101
(b) Bcf of gas	34,672	24,517	59,189	5,860	10.10
(c) Million Barrels of Oil	5,779	4,086	9,865	5,860	1.68

EXHIBIT 4

Summary of the Effective Government Share of Total Production Value from OCS Oil and Gas Leases Sold Between 1954 and 1970

Line No.		In Nominal Dollars (1000's)	In Constant 1978 Dollars (1000's)	Discounted Present Value In Constant 1978 Dollars (1000's)
(1)	1954-1970 Bonuses	$ 3,668,343	$ 7,128,774	$10,541,941
	1955-1976 Production Revenue			
(2)	Gross Value	16,600,615	23,783,562	28,592,131
(3)	Royalty @ One Sixth	2,766,679	3,963,927	4,765,355
	1977-2010 Production Revenue			
(4)	Gross Value	63,676,200	39,985,100	32,244,600
(5)	Royalty @ One Sixth	10,612,700	6,664,200	5,374,100
	Government Share			
(6)	Lease Bonuses	3,668,343	7,128,774	10,541,941
(7)	Royalties	13,379,379	10,628,127	10,139,455
(8)	Subtotal	17,047,722	17,756,901	20,681,396
(9)	Production Value 1955-2010	80,276,815	63,768,662	60,836,731
(10)	Effective Government Share of 1955-2010 Production Value	21.2%	27.8%	34.0%

EXHIBIT 5

Summary of the Effective Government Share of Total Production Value from OCS Leases Sold in 1976

Line No.		In Nominal Dollars (1000's)	In Constant 1978 Dollars (1000's)	Discounted Present Value In Constant 1978 Dollars (1000's)
(1)	1970 Bonuses	$ 945,065	$ 1,573,281	$ 1,992,985
	1971-1976 Production Revenue			
(2)	Gross Value	2,887,790	3,509,721	3,841,964
(3)	Royalty @ One Sixth	481,298	584,954	640,327
	1977-2010 Production Revenue			
(4)	Gross Value	20,067,000	13,022,462	10,739,900
(5)	Royalty @ One Sixth	3,344,500	2,170,410	1,789,983
	Government Share			
(6)	Lease Bonuses	945,065	1,573,281	1,992,985
(7)	Royalties	3,825,798	2,755,364	2,430,310
(8)	Subtotal	4,770,863	4,328,645	4,432,295
(9)	Production Value 1971-2010			
(10)	Effective Government Share of 1971-2010 Production Value	22,954,790 20.8%	16,532,183 26.2%	14,581,864 30.%

EXHIBIT 6

Liquids and Gas Prices, In Constant 1978 Dollars,
Used to Calculate 1977-2010 Production Values For
Leases Sold During 1954 Through 1970

	1954-1969 Leases			1970 Leases		
Year	Liquids Price/Bbl.	Liquids Price/MMBtu [1]	Natural Gas Price/Mcf	Liquids Price/Bbl.	Liquids Price/MMBtu	Liquids Price/Mcf
1978	$ 9.21	$1.535	$ .650	$10.80	$1.800	$1.065
1980	10.59	1.765	.925	11.86	1.977	1.174
1985	15.00[2]	2.500	1.500	15.00[2]	2.500	1.500
1990	18.50[2]	3.083	2.400[2]	18.50[2]	3.083	2.400[2]
1995	22.50	3.750	3.366	22.50	3.750	3.366
2000	27,38	4.564	4.095	27.38	4.564	4.095
2005	31.75	5.291	4.748	31.75	5.291	4.748
2010	36.30	6.133	5.504	36.20	6.133	5.504

[1] Assumes 6 MMBtu per barrel of oil.

[2] Department of Energy, Energy Information Administration, current 1985 and 1990 price forecasts.

EXHIBIT 7

Estimated Effective Government Share of Total Production Value From OCS Leases Sold During The Period 1971-1977 If Productivity Per Acre Equals Average Productivity Per Acre From OCS Leases Sold During The Period 1954-1970

Present Value of Bonuses In Billions of 1978 Dollars	$22.7
Acreage Sold In 1,000's	7,717
Estimated Oil and Gas Production In Quadrillion Btu per Acre	.0101
Estimated Oil and Gas Production In Quadrillion Btu	77.9
Present Value of Oil and Gas Production In Billions of 1978 Dollars at Deflated Constant Dollar Price of $2.25 per MMBtu	$175.3
Present Value of Royalties @ One-Sixth of Production Revenues	$29.2
Present Value of Government Share (Royalties Plue Bonuses)	$51.9
Government Share As a Percent of Total Production Revenues	29.6%

EXHIBIT 8

Estimated Effective Government Share of Total Production Value from OCS Leases Sold During the Period 1971-1977 If Productivity Per Acre Is 25 Percent Greater Than the Average Productivity Per Acre from Leases Sold During the Period 1954-1970

Present Value of Bonuses In Billions of 1978 Dollars	$22.7
Acreage Sold In 1,000's	7,717
Estimated Oil and Gas Production In Quadrillion Btu per Acre	.0126
Estimated Oil and Gas Production In Quadrillion Btu	97.4
Present Value of Oil and Gas Production In Billions of 1978 Dollars at Deflated Constant Dollar Price of $2.25 Per MMBtu	$219.2
Present Value of Royalties @ One-Sixth of Production Revenues	$36.5
Present Value of Government Share (Royalties Plue Bonuses)	$59.2
Government Share As a Percent of Total Production Revenues	27.0%

EXHIBIT 9

Estimated Effective Government Share of Total Production Value from OCS Leases Sold During the Period 1971-1977 If Productivity Per Acre Is 25 Percent Less Than the Average Productivity Per Acre from Leases Sold During the Period 1954-1970

Present Value of Bonuses In Billions of 1978 Dollars	$22.7
Acreage Sold In 1,000's	7,717
Estimated Oil and Gas Production In Quadrillion Btu per Acre	.0076
Estimated Oil and Gas Production In Quadrillion Btu	58.5
Present Value of Oil and Gas Production In Billions of 1978 Dollars at Deflated Constant Dollar Price of $2.25 per MMBtu	$131.6
Present Value of Royalties @ One-Sixth of Production Revenues	$21.9
Present Value of Total Government Share (Royalties Plus Bonuses)	$44.6
Government Share As a Percent of Total Production Revenues	33.9%

EXHIBIT 10

National Production Value and Royalty Value of OCS Sale 48 Leases in Constant 1978 Dollars

	Estimated Annual Oil Production (1000 Bbls.)	Oil Price in Constant 1978 Dollars ($/Bbls.)	Value of Oil Production in 1978 Dollars (1,000's)	Estimated Annual Gas Production (MMcf)	Gas Price in Constant 1978 Dollars ($/Mcf)	Value of Gas Production in 1978 Dollars (1,000's)
1982	730.0	$14.00	$ 10,220	3,466	$2.48	$ 8,596
1983	2,920.0	14.25	41,610	14,711	2.59	38,101
1984	6,314.5	14.75	93,139	30,224	2.69	81,304
1985	9,964.5	15.00	149,468	47,725	2.76	131,722
1986	11,680.0	15.64	182,675	55,884	2.86	159,827
1987	11,461.0	16.31	186,929	54,890	2.96	162,475
1988	9,818.5	17.01	167,013	47,028	3.06	143,905
1989	7,811.0	17.74	138,567	37,411	3.17	118,592
1990	6,132.0	18.50	113,442	29,295	3.28	96,086
1991	4,891.0	19.24	94,103	23,461	3.39	79,533
1992	4,124.5	20.00	82,490	19,699	3.51	69,143
1993	3,613.5	20.80	75,161	17,192	3.63	62,405
1994	3,212.0	21.96	70,536	15,345	3.76	57,696
1995	2,883.5	22.50	64,879	13,781	3.89	53,608
1996	2,628.0	23.40	61,495	12,618	4.03	50,851
1997	2,409.0	24.34	58,635	11,583	4.17	48,229
1998	2,226.5	25.31	56,353	10,653	4.31	45,913
1999	2,080.5	26.32	54,759	9,955	4.47	44,499
2000	1,934.5	27.38	52,967	9,258	4.62	42,770
	96,834.5	$18.17	$1,754,441	464,179	$3.22	$1,495,325

Total Value of Oil and Gas In 1978 Dollars (1000's) $3,249,766
Percent of Total Leases (148) with Fixed Royalty (73) 49.3%
Estimated Production Value of Leases with Fixed Royalty (1000's) $1,602,135
Estimated Royalty Value of Leases with Fixed Royalty (1000's) ..... $ 267,022

JAMES W. MOORMAN
Assistant Attorney General

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Washington, D.C. 20530
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Counsel for Federal Defendants

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

Civil No. 79-1633

ENERGY ACTION EDUCATIONAL FOUNDATION, ET AL., PLAINTIFFS

v.

CECIL D. ANDRUS, ET AL., DEFENDANTS

ANSWER TO COMPLAINT

First Defense

The complaint fails to state a claim for which relief can be granted.

Second Defense

The defendants answer the specific allegations of the complaint as follows:

1. Paragraph (1) contains no allegations of fact and requires no answer.

2. With respect to the allegations in paragraph (2), defendants are without knowledge or information sufficient to form a belief as to the place of residence of plaintiffs and deny that any causes of action have arisen.

3. With respect to the allegations in paragraph (3), defendants are without knowledge or information sufficient to form a belief as to their truth.

4. With respect to the allegations in paragraph (4), defendants deny any injuries and incorporate herein their responses to paragraphs (129)-(132) of the complaint.

5. With respect to the allegations in paragraph (5), defendants deny in subparagraph (a) that the United States holds title to all lands and resources of the outer continental shelf and aver that the United States claims the right to explore for and exploit the natural resources of the outer continental shelf. In subparagraph (c), defendants deny that James R. Schlesinger is the Secretary of the Department of Energy and aver that Charles W. Duncan, Jr. is the Secretary of the Department of Energy. Defendants admit the other allegations in paragraph (5).

6. With respect to the allegations of paragraph (6), defendants deny that they have not adhered to objectives specified by Congress. The remainder of paragraph (6) contains no allegations of fact and requires no answer.

7. With respect to the allegations in paragraphs (7)-(14), they are statements or interpretations of law relating to the early history of onshore mineral exploitation, and, to the extent that they are not accompanied by citations, defendants are without knowledge or information sufficient to form a belief as to their truth. Otherwise, the law speaks for itself and requires no answer.

8. With respect to the allegations in paragraphs (15)-(29), they are statements or interpretations of law regarding development and enactment of the Submerged Lands Act and Outer Continental Shelf Lands Act of 1953. To the extent they are not accompanied by citations, defendants are without knowledge or information sufficient to form a belief as to their truth. Otherwise, the law speaks for itself and requires no answer.

9. With respect to paragraph (30), defendants admit the statistics therein but deny all characterizations of the statistics, including the suggestion in the second sen-

tence that the pace of leasing after 1972 was not reasonable.

10. With respect to the allegations in paragraph (31), defendants deny the suggestion in the first sentence that industry opposition was the sole basis for not utilizing other bidding methods and deny the characterization here, and in every other part of the complaint, of the bonus bidding-fixed royalty system of bidding as the "bonus bidding-low royalty" system. Defendants deny the suggestion in the third sentence that all high bidders are awarded leases. Only bidders submitting high bids deemed by the Secretary to be sufficiently high are awarded leases. Defendants admit the other allegations in the paragraph.

11. With respect to the allegations of paragraph (32), defendants admit that from 1973 through March 1978 at two lease sales some tracts were offered by royalty bidding and that at every OCS lease sale at least a portion of the tracts were offered on a cash bonus-fixed royalty basis where the royalty was set at 16⅔% in the majority of cases. Defendants aver that since March 1978, the Secretary has employed a sliding scale bidding system to at least a portion of the leases offered. Defendants deny all other allegations or suggestions of paragraph (32).

12. With respect to the allegations in paragraph (33), defendants admit that the 1953 OCS Lands Act gave the Secretary substantial power to achieve the objectives of the Act and they deny all others.

13. Defendants deny the allegations in paragraph (34).

14. With respect to the allegations in paragraph (35), defendants admit that the Secretary has authority to conduct exploratory drilling and has not conducted or contracted for such drilling. Defendants deny all other allegations in paragraph (35) and aver that the Secretary requires, as a condition of pre-lease exploration permits, including exploratory drilling permits, that per-

mittees make all information obtained as a result of permit operations available to the Secretary.

15. Defendants deny all allegations in paragraph (36), and aver that they rely on nominations from industry as well as other sources in determining tracts to be offered for leasing.

16. Defendants deny the allegations in paragraph (37).

17. With respect to the allegations in paragraph (33), defendants deny the first sentence and deny any suggestion in the quotation that defendants have insufficient resource information before offering tracts for leasing.

18. With respect to the allegations in paragraph (39), defendants deny the first sentence. Defendants admit the statistics in the second and third sentences but deny all characterizations of the statistics, including the suggestion that single bid tracts are sold on a noncompetitive basis. Defendants deny the fourth sentence.

19. With respect to the allegations in paragraph (40), defendants admit the statistics in the second sentence, but deny the characterizations of the statistics and all other allegations in the paragraph.

20. With respect to the allegations in paragraph (41), defendants admit the statistics in the second and third sentences and deny the characterizations of the statistics and all other allegations in the paragraph.

21. With respect to the allegations in paragraph (42), the first clause is an interpretation of law requiring no answer and defendants deny the second clause.

22. Defendants deny the allegations in paragraph (43).

23. Defendants deny the allegations in paragraph (44) and aver that the cash bonus-fixed royalty bidding system is one of many factors which may affect a bidder's decision on whether to engage in joint bidding.

24. Defendants deny the allegations in paragraph (45).

25. Defendants admit the allegations in paragraph (46).

26. With respect to the allegations in paragraph (47), defendants deny the first sentence, admit the statistics in the second and third sentences, deny the characterizations of the statistics and deny the fourth sentence.

27. Defendants deny the allegations in paragraph (48).

28. With respect to the allegations in paragraph (49), defendants admit the first, third, fourth and fifth sentences. Defendants deny the second sentence and aver that many more smaller companies are participating in OCS lease sales than ever before.

29. With respect to the allegations in paragraph (50), defendants deny the first sentence, admit the statistics in the remainder of the paragraph but deny the characterizations of the statistics.

30. With respect to the allegations in paragraph (51), defendants deny the first and last sentences, admit the statistics as to leases awarded by joint bidding in the intervening sentences and deny the characterizations of the statistics.

31. With respect to the allegations in paragraph (52), defendants admit the statistics in the second sentence as to leases awarded by joint bidding and deny the characterizations of the statistics and all other allegations.

32. Defendants deny the allegations in paragraph (53).

33. With respect to the allegations in paragraph (54), defendants deny the first and last sentences and aver that the number of bidders is one indication of the success of a bidding system. Defendants admit the second sentence and accompanying citation.

34. Defendants deny the allegations in paragraph (55).

35. With respect to the allegations in paragraph (56), defendants deny the first and fourth sentences. The references in the second and third sentences are so unspe-

cific that defendants are without knowledge or information to form a belief as to their truth.

36. Defendants deny the allegations in paragraph (57) and aver that the statistics do not take into consideration that many of the bids referred to were submitted by joint bidders.

37. Defendants deny the allegations in paragraphs (58) and (59).

38. With respect to paragraph (60), the first clause in the first sentence is an interpretation of law requiring no answer and defendants deny all other allegations in the paragraph.

39. With respect to the allegations in paragraph (61), defendants deny the first sentence and aver that larger oil companies have acquired more leases than smaller oil companies by the cash bonus-fixed royalty bidding method as well as by alternative bidding methods and that the larger companies derive a substantial share of their assets and revenues from overseas production. As to the statistics in the remainder of the paragraph, defendants are without knowledge or information to form a belief as to their truth and defendants deny any suggestion that declining domestic oil production is the result of either OCS bidding system or foreign holdings of major oil companies.

40. With respect to the allegations in paragraph (62), defendants deny any suggestion that foreign holdings or operations of major oil companies is the reason for declining production in the United States and aver that the decline of production is the result of numerous factors. More specifically, defendants deny the first two sentences. Defendants are without knowledge or information sufficient to form a belief as to the truth of paragraph (62a). As for paragraph (62b), the description of the Foreign Investment Tax Credit and its operation in the first three sentences is a conclusion of law and requires no answer, and defendants are without knowledge or information sufficient to form a belief as to the truth of the fourth and fifth sentences of paragraph (62b). As for paragraph

(62c), defendants deny the first sentence. Defendants admit the statistics in the second and third sentences but deny the characterizations of the statistics and all other allegations in paragraph (62c). As for paragraph (62d), defendants deny the first sentence and admit the second sentence. Defendants deny the third and fourth sentences and aver that the OPEC nations began to play an assertive and aggressive role in world oil policy and that domestic oil prices have been lower than world prices.

41. With respect to the allegations in paragraph (63), defendants deny the first sentence. Defendants admit the statistics in paragraph (63a) and deny the characterizations of the statistics. Defendants deny paragraphs (63b) and (63c). As for paragraphs (63d), defendants admit that the citation to and quote from the Comptroller General's report is accurate but deny the conclusions of the report and the remaining allegations in the paragraph.

42. Defendants deny the allegations in paragraphs (64) and (65).

43. With respect to the allegations in paragraph (66), the interpretation of the OCS Lands Act is a conclusion of law requiring no answer and defendants deny the remainder of the first sentence. Defendants deny the second and third sentences.

44. Defendants deny the allegations in paragraphs (67)-(69).

45. With respect to the allegations in paragraph (70), defendants deny the first sentence. As to the second sentence, defendants admit that the quote regarding onshore leasing was made, but they deny the suggestion that the return to the Federal Government for federal offshore leases is inadequate when compared to the return to state governments for state offshore leases. The third sentence is a conclusion of law and requires no answer.

46. With respect to the allegations in paragraph (71) and (72) defendants are without knowledge or information sufficient to form a belief as to their truth.

47. With respect to the allegations in paragraph (73), defendants deny the first sentence and admit the second,

Defendants admit the third sentence except they deny that the tracts were selected at random. Defendants admit the statistics in the fourth sentence through the eighth sentence but deny the characterizations of the statistics and any suggestion that the use of other bidding systems has not promoted competition. Defendants deny the ninth sentence.

48. Defendants admit the statistics in paragraph (74) but deny the characterizations of the statistics.

49. With respect to the allegations in paragraph (75), defendants admit the first three sentences. Defendants admit the factual allegations of the fourth sentence but deny the characterization "most successful" and aver that the described results of the two sales referred to were opposite from the results of the other three sales.

50. Defendants are without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraphs (76)-(79), but defendants deny any suggestion that the United States is not receiving fair value for its leases or that it is not experimenting with alternative bidding systems in accordance with Section 8 of the OCS Lands Act, 43 U.S.C. 1337.

51. With respect to the allegations in paragraph (80), defendants deny the first sentence, and incorporate herein their answer to paragraphs (76)-(79) of the complaint. Defendants deny the second sentence.

52. Defendants deny the allegations in paragraphs (81)-(84).

53. With respect to the allegations in paragraph (81), defendants admit that the citation to the Department of Energy report is correct, except that the year of the report is 1979. Defendants deny the remainder of the paragraph and aver that the paragraph distorts the conclusions of the Department of Energy report.

54. With respect to the allegations in paragraph (86), in the first sentence defendants admit that in some instances the government has received significant payments for the right to develop oil and gas resources that prove not to exist and defendants deny the remainder of the

sentence. Defendants deny the second sentence and aver that a percentage of exploratory wells are dry holes. Defendants deny the third and fourth sentences.

55. Defendants admit the allegations in paragraph (87) and aver that the Rose memorandum was only a theoretical analysis and did not account for practical difficulties in administering a profit share system.

56. Defendants deny the allegations of paragraphs (88) and (89).

57. Defendants admit the allegations in paragraph (90) and aver that the entire report speaks for itself.

58. With respect to the allegations in paragraphs (91)-(95), defendants admit the statements in the Comptroller General reports are quoted accurately, but deny all other allegations including the statements or the accompanying summaries of them.

59. With regard to the allegations in paragraph (96), defendants admit that the FTC comments are quoted accurately, and they aver that with regard to the FTC recommendation defendants have issued draft regulations for experimenting with alternative lease payment systems in accordance with Section 8 of the OCS Lands Act, 43 U.S.C. 1337. Defendants deny all other allegations of paragraph (96).

60. Defendants deny the allegations of paragraph (97) and aver that defendants and others have viewed the bonus bidding-fixed royalty bidding with a critical eye and are experimenting with alternative systems in accordance with the mandate of the OCS Lands Act.

61. With respect to the allegations in paragraph (98), because the quotation is unaccompanied by a citation defendants are without knowledge or information sufficient to form a belief as to the accuracy of the quotation. Defendants deny the quotation and all other allegations of paragraph (98).

62. With respect to the allegations in paragraph (99), defendants admit that the assertions and conclusions of all persons are quoted accurately but deny that they are correct. Defendants aver specifically as to Sec-

retary Morton's statement that a rise in the price of oil after a lease sale does not necessarily render the economic terms of lease offered by the bonus bidding-fixed royalty system inadequate. Defendants deny all other allegations and suggestions of paragraph (99).

63. Defendants admit the allegations in paragraph (100) and aver that with the changes in the price of oil the Department of the Interior adjusts the price which it uses as one of several factors in evaluating tracts offered for leasing.

64. With respect to the allegations in paragraph (101), defendants admit the Committee statements, and defendants deny all other allegations including any suggestion that the bonus bidding-fixed royalty system does not promote competition and assure a fair return. Defendants aver that they are in compliance with the OCS Lands Act Amendments which were partly developed in this Committee.

65. Defendants admit the allegations in paragraph (102).

66. Defendants admit the quotations in paragraphs (103) and (104) and deny all other allegations and any suggestion that the bonus bidding-fixed royalty system does not promote competition and assure a fair return.

67. With respect to the allegations in paragraph (105), defendants admit that the Department of the Interior did not conduct its own exploration, deny the remainder of the paragraph and aver that they have experimented with bidding systems as mandated by the OCS Lands Act Amendments.

68. The allegations in paragraphs (106)-(118) are conclusions of law and require no answer. Defendants aver that the law speaks for itself.

69. With respect to the allegations in paragraph (119), defendants deny the first and second sentences and aver that 5 lease sales have been held since passage of the OCS Lands Act Amendments at which approximately half the leases were offered by the cash bonus-fixed royalty bidding method. The balance of the leases

were offered by the cash bonus-sliding scale royalty method. Defendants deny the third sentence. Defendants admit the statistics in the fourth through twelfth sentences but deny the characterizations of the statistics.

70. Defendants deny the allegations in paragraph (120), and aver that allegations incorrectly assume that leases jointly held by small and large companies are held solely by large companies.

71. Defendants admit the allegations in paragraph (121) and deny any suggestion of violations of the OCS Lands Act.

72. With respect to the allegations in paragraph (122), defendants admit the first, second and third sentences. Defendants deny the fourth sentence and aver that the United States is continuing to hold lease sales during the world shortage of oil and gas and rising prices. Defendants incorporate herein their answers to paragraph (99) of the complaint.

73. With respect to the allegations in paragraph (123), in the first sentence the reference to the OCS Lands Act Amendments of 1978 is a conclusion of law which requires no answer. Defendants admit that the Secretary of Energy has not promulgated final bidding regulations and defendants aver that the Secretary issued proposed regulations on three bidding systems on August 6, 1979. The second sentence is a conclusion of law and requires no answer. Defendants admit the third sentence. Defendants deny the fourth, fifth and sixth sentences except as to admitting the accuracy of the quoted segment of the fifth sentence.

74. Defendants deny all allegations in paragraph (124), except they admit that the Comptroller General's report is quoted accurately.

75. Defendants admit the allegations in paragraph (125), but they deny any suggestion in the fourth sentence that royalties increase on a step-by-step basis rather than on a semi-logarithmic basis and in the sixth sentence that Lease Sale No. 48 was in violation of the OCS Lands Act.

76. With respect to the allegations in paragraph (126), defendants admit the issuance of the report and deny all other allegations.

77. With respect to the allegations in paragraph (127), defendants deny the first sentence. Defendants admit the three quotations and deny the preceding summaries to the quotations. Specifically as to the quotations, defendants aver that the proponents espouse experimentation with profit share bidding systems; they do not state, as the allegations suggest, that the profit share systems are conclusively superior to other systems. Defendants deny the last sentence and aver that retaining the bonus bidding-fixed royalty bidding system for a percentage of leases, as was done for Lease Sale No. 48, is required by the OCS Lands Act.

78. With respect to the allegations in paragraph (128), defendants admit that the Comptroller General's report is cited and quoted accurately but deny that the conclusions quoted are correct and deny all other allegations or suggestions in paragraph (128).

79. Defendants deny the allegations in paragraph (129).

80. With respect to the allegations in paragraph (130), defendants deny the first sentence. As to the second sentence, defendants admit that federal revenues from OCS leases are deposited in the Treasury but deny the allegations of the remainder of the sentence.

81. With respect to the allegations in paragraph (131), the first two sentences are presumably conclusions of law and require no answer. Defendants deny the third and fourth sentences but admit that oil and gas are nonrenewable resources. The fifth sentence is presumably a conclusion of law and requires no answer. Defendants deny the sixth sentence.

82. With respect to the allegations of paragraph (132), defendants are without knowledge or information to form a belief as to the truth of the first sentence. Defendants deny the remainder of the paragraph.

83. Paragraphs (133) and (134) are conclusions of law and require no answer.

84. With respect to paragraph (135), the reference to Congressional authorization of alternative bidding systems in the first sentence is a conclusion of law requiring no answer and defendants deny the remainder of the sentence. Defendants deny the second sentence. The third sentence is a conclusion of law and requires no answer.

85. With respect to the allegations in paragraph (136), defendants deny the first three sentences and aver that the Secretary of Energy issued proposed regulations on three bidding systems on August 6, 1979, and that the Secretary of the Interior is able to utilize those three bidding systems. Defendants deny the fourth sentence but admit that regulations governing competitive review have not been issued. As to the fifth sentence, defendants admit the existence of the Comptroller General's report but deny its conclusions and all other allegations in the sentence.

86. Defendants deny the allegations in paragraph (137) and incorporate herein their answers to paragraphs (87), (99), (103)-(104), and (127) of the complaint in answering the first sentence. Defendants deny the second sentence.

87. With respect to the allegations in paragraph (138), defendants admit that in Lease Sale No. 48 and other sales the Secretary of the Interior has employed the cash bonus-fixing royalty bidding system and the cash bonus-sliding scale royalty system and defendants deny all other allegations.

88. Defendants deny the allegations in paragraph (139) and aver that they are using bidding systems as mandated by the OCS Lands Act.

89. With respect to the allegations in paragraph (140), the first sentence is a conclusion of law and requires no answer. Defendants deny the second sentence.

90. Defendants deny the allegations in paragraphs (141)-(143).

91. The allegations in paragraphs (144) and (145) are conclusions of law requiring no answer.

92. With respect to the allegations in paragraph (146), defendants aver that the Secretary of the Interior's utilization of the cash bonus-fixed royalty bidding method is in accordance with the mandates and objectives of the OCS Lands Act and defendants deny all other allegations.

93. Defendants deny the allegations in paragraphs (147)-(150).

94. The allegations in paragraph (151) are conclusions of law and require no answer.

95. Defendants deny the allegations in paragraph (152)-(155).

96. With respect to the allegations in paragraph (156) and (157) defendants admit the Comptroller General's reports are accurately quoted but deny the conclusions of the reports. Defendants deny all other allegations in the paragraphs.

97. Defendants deny the allegations in paragraphs (158) and (159).

98. Further defendants deny each and every allegation of the complaint not specifically admitted.

WHEREFORE, defendants respectfully request that the Court enter judgment for defendants, dismiss the complaint and order such additional relief as may be deemed appropriate.

Respectfully submitted,

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Dated: October 26, 1979

U.S. EXHIBIT NO. 6

A PRESENTATION TO THE OCS ADVISORY BOARD

December 15, 1978

H. Theodore Heintz, Jr.
Assistant Director, Office of Policy Analysis
U.S. Department of the Interior

* * * * *

II. *Patterns of Bidding*

The most obvious statistics to examine regarding OCS lease sales are the number of bids per tract and the bonuses. For all leases awarded from 1954 through 1977, there have been 3.25 bids/tract and bonuses averaged $1326 per acre. In looking at these statistics, one discovers however, that behind the simple averages lie some interesting patterns. OCS oil and gas, though a very valuable resource, is very unevenly distributed throughout the OCS. The locations and sizes of hydrocarbon reservoirs are initially unknown and can only be determined by costly exploratory drilling. Given these uncertainties, oil and gas leases convey a mineral right to a resource that frequently, if not usually, turns out not to be present in a given tract. Typically, there is a small chance of finding oil and gas on most tracts. On the better prospects there is a slightly better chance. Most discoveries are modest in size, but there are a few that are very large. The very high value of large reservoirs once they are found makes it worth the high cost of exploration. What we see behind the averages reflects this pattern of resource distribution and the risk taking behavior necessary to find oil and gas.

As you might expect, bidding is more intense in lease sales that offer better prospects. The Mid-Atlantic Sale in August 1976 drew 4.06 bids/tract and yielded over a billion dollars in bonuses, an average of $2130 per acre

leased. But six months earlier, a Gulf of Mexico sale drew only 1.44 bids/tract and yielded $176 million at $1090 per acre. Our most recent Gulf of Mexico sale (#65), drew 1.77 bids/tract and yielded $61 million in bonus revenues at $304 per acre. It is important to recognize that in each case, many tracts offered drew no bids. Also, to assess the levels of competition, one must keep in mind that our bid counts don't reflect the number of zero bids—firms that considered bidding on a tract and were potential competitors, but decided not to enter a bid.

The pattern of greater competition on better prospects is even more evident in comparing bids on individual tracts than in comparing sales. Table 1 gives some interesting statistics for the 3220 leases awarded through 1977.

Note that a very high percentage of the tracts, 39%, received only 1 bid. These tracts clearly pull the overall average down substantially. They also contributed a disproportionately small amount to total bonus value collected—only 10%. These tracts were clearly viewed as poor prospects at the time of the sale.

Their production histories confirm these expectations. Only 9% of the leases on tracts receiving 1 bid have had production. This 39% of the leases accounted for only 17% of the value of production.

Similarly, 19% of the leases received 2 bids and produced 8% of the total bonus value. Of these slightly better prospects, 15% have had production, providing about 16% of the total value of production.

Looking at the bidding on better prospects, we see that 42% of the leases drew 3 or more bids while yielding 82% of the bonus value collected. Drilling outcomes confirm the expectations of bidders. More of these tracts, 22%, have had production and their percentage of the total value of production has been disproportionately higher: 64% for this 42% of the leases.

Table 1

Summary of Bidding Patterns

Number of Bids Received	Percent of All Leases Issued	Percent of Total Bonus Value Collected	Average of High Bids ($ millions)	Productive Leases as a Percent of Leases Issued	Value of Production as a Percent of Total Value of Production	Value of Production Per Acre ($ thousands/acre)
1	39	10	1.5	9	17	1225
2	19	8	2.5	15	16	1437
3, 4	19	19	5.8	20	21	1442
5, 6, 7	13	25	10.8	21	19	2729
7	10	38	20.8	29	27	3216

1. Data for 3220 leases issued in 1954-1976 period.
2. All dollar values expressed in 1975 dollars.

Another way to see this pattern is to look at how much is bid for tracts receiving different numbers of bids. These data are shown in Figure 1. A full 77% of the leases receiving 1 bid were under $1.3 million in bonus. (1975 dollars have been used in aggregating these statistics.) Only 6% of these leases brought bonuses over $5 million. The average was $1.5 million.

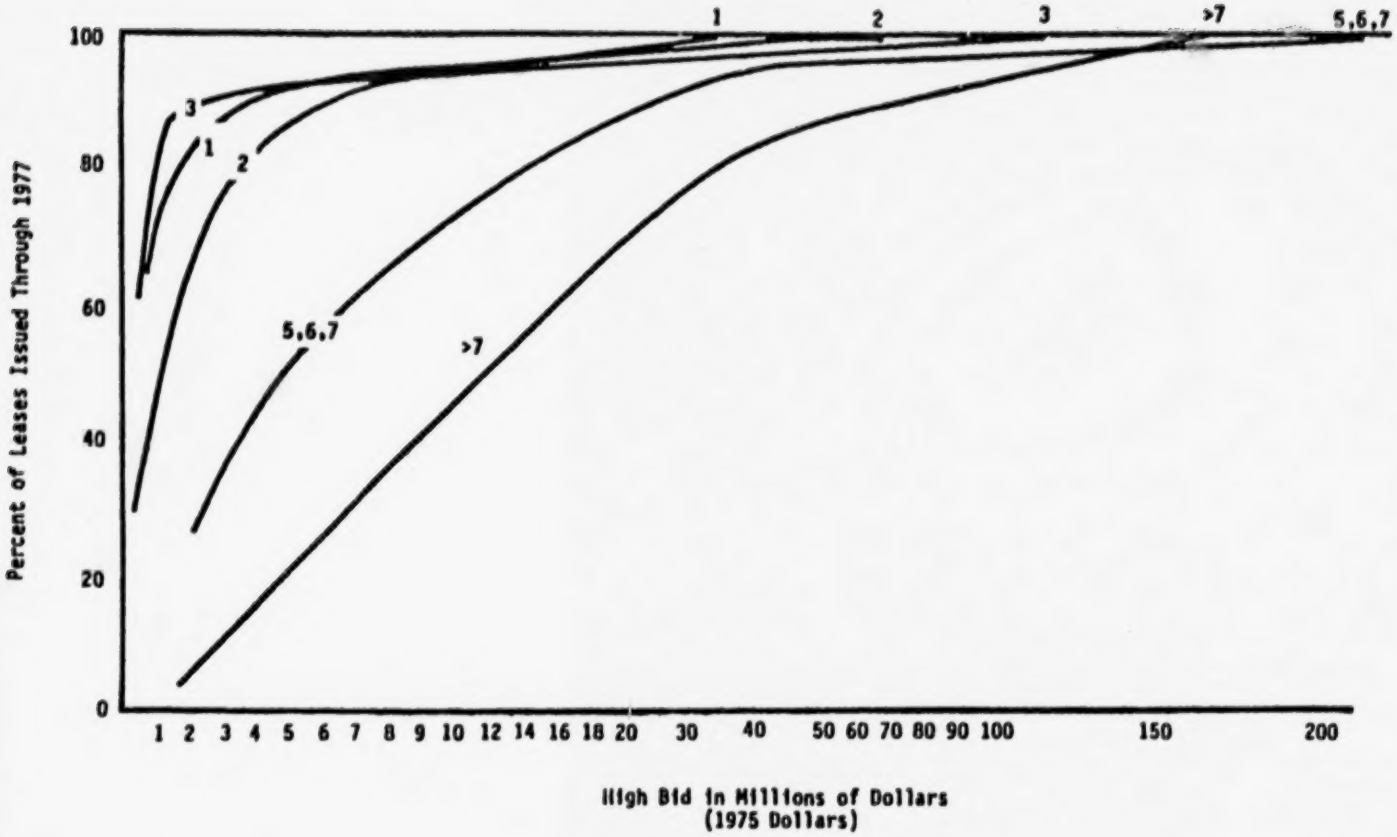
As we look at leases drawing more bids, the pattern gradually shifts, decreasing the portion of bids at lower dollar levels and increasing the portion at higher levels. For 2-bid tracts, 58% were under $1.3 million and the average was $2.5 million. For 3- and 4-bid tracts, 88% were under $1.2 million, but the average had moved up to $5.8 million. For 5-, 6- and 7-bid tracts, only 27% were under $2.1 million while 52% drew over $4.2 million. The average was $10.8 million. For leases drawing more than 7 bids only 5% were under $1.7 million while 76% were over $5 million. The average was $20.8 million, but this set includes a few very good prospects: 20% of these leases drew over $35 million.

These patterns show that many tracts are leased without strong competition, but that far fewer such low-competition leases have economically producible reservoirs. Firms awarded such leases pay smaller bonuses for riskier prospects. Conversely, most of the production occurs from tracts which drew moderate or strong competition. Firms winning these leases paid substantially higher bonuses. In summary, competition for the oil and gas resource is much stiffer than indicated by the average number of bids per tract.

These observations are important to our thinking about the potential gains for improving competition over past levels. If we are trying to increase Federal revenues for the resource, then the opportunities for gains from competition alone may be limited. Several theoretical studies have shown that the seller captures a higher portion of the rent as the number of bidders in an auction in-

FIGURE 1

CUMULATIVE PERCENTAGE DISTRIBUTION OF HIGH BIDS
FOR TRACTS DRAWING DIFFERENT NUMBERS OF BIDS



creases. They also show, however, that the percentage gains become relatively smaller as the number of bidders increases. For example, while increasing from 2 to 3 bidders gives a theoretical gain of 11% of the rent, according to work by Robert Wilson, increasing from 3 to 4 gives 4% and from 4 to 5, only 2%.

Thus, while overall increases in the number of bidders would be beneficial, the potential revenue gains from increasing competition on low-competition tracts are limited by their poor prospects. On the other hand, potential revenue gains from increasing competition on better prospects are limited because the number of bidders is already great enough to capture most of the rent for the government.

III. *Rates of Return*

Another way to judge the performance of a bidding system is to determine if the bidders are reaping surplus profits on their leases. An ideal bidding system would capture for the government all but the "normal" profits required to lure investment into the OCS oil and gas business. A number of difficulties are faced in trying to measure profits on the OCS. We do not have a substantial body of data on actual expenses incurred by our lessees in exploring and developing individual tracts. Company accounting practices in the past have not provided such separate accounting.

A second difficulty is that many tracts will be in production for years to come. Future production is not on the books yet, but it will provide the return on investment in exploration and development. To include future production revenues in the estimation of rates of return, it is necessary to project both production and future prices.

Some of these difficulties can be overcome, however, especially if we are less concerned with the profits on individual leases, and more concerned about fair return to

the public for OCS resources in general. It is clearly possible for a few leases to produce extraordinary profits. Some discoveries are clearly beyond expectation. It is also possible for a few leases to produce extraordinary losses. Firms in the OCS oil and gas business face these possibilities every time they acquire a lease or invest in exploratory drilling. It is not likely that a firm will be able to win leases on only the most profitable tracts. In looking for opportunities for improvement, we are more interested in overall patterns. It is appropriate, therefore, to look at overall rates of return for OCS leases and for subsets of OCS leases with different characteristics.

Staff of the U. S. Geological Survey have tackled this challenging task using drilling and production data for leases issued through 1969. Later leases were not included because of uncertainties about future discoveries and resulting production. By estimating the costs of drilling and development and projecting past production into the future by decline analysis, it is possible to estimate internal rates of return for the estimated cash flow streams associated with various aggregates of leases. Some very interesting observations emerge.

A word about rate of return is needed before we get into the statistics. The internal rate of return is the interest rate at which an investment can be financed and still break even. It is a measure of profit that is closer to true economic profit than the definitions of profit used in reporting income to the IRS or in corporate profit and loss statements. It is a good tool for judging whether returns are "normal" because it allows comparison with other investments whose rates of return are easily known —savings accounts and government bonds, for example.

The rate of return analysis for all leases issued through 1969 shows an aggregate rate of return of 8.92%. That's the interest you could have paid to finance your business

had you been a single lessee acquiring and operating all leases, paying the bonuses that have been paid, and drilling and producing as OCS lessees have. Because these estimates are particularly sensitive to assumptions about future production and prices, it's really best to think of ranges. With higher prices such as could result from full deregulation, the rate of return is estimated to be 10.8%. A slower decline in production from these leases —10% rather than 15%—would result in an aggregate rate of return of 10.7%. Similarly, lower prices or more rapid production decline would give lower rates of return —in the order of 6 to 7%.

Again, behind this aggregate figure lie the same sort of patterns that we saw in the bidding. Most of the 1223 leases have had no production. Their rates of return are negative because the investment in bonus payments and exploratory drilling yielded no revenue. Only 447 of the set have had production. Of these, 276 have positive rates of return when production is projected to decline at 15% per year. Leases with negative return pull down the aggregate rate of return just as they pull down the profits of the firms who acquired those leases. The distribution of rates of return on these tracts which are "in the black" is shown in Table 2. Of the 276 tracts

Table 2

Distribution of Internal Rates of Return
for 276 Tracts "In the Black"
(Leases Issued Through 1969)

Internal Rate of Return		Percent of Tracts In the Black	Percent of All Leases
>0	≤10	27	6
>10	≤20	40	9
>20	≤30	15	3
>30		19	4

estimated to have positive rates of return, 27% have rates less than 10% and 40% have rates between 10% and 20%. 15% have rates between 20% and 30%. And

19% of the tracts with positive rates are over 30%. There are clearly a few tracts that produce high profits. They amount to about 4% of the 1223 leases analyzed.

The goal for a bidder is clearly to acquire only high profit tracts. An examination of rates of return for individual bidders shows that this is difficult if not impossible. For those firms ranking in the top 20 in acreage, the highest estimated rate of return is 14%. One firm in this group shows zero return. Uncertainty about the location of the resource appears to guarantee that firms will take the bad with the good.

It is useful in assessing opportunities for improvements in bidding systems to examine the effect of bidding patterns and bonus payments on rates of return. Figure 2 shows the relevant data. Bonus payments have clearly reduced the rates of return achieved by lessees. Without bonus payments, the 8.92% aggregate rate of return would have been 17.1%. In a sense, this is society's rate of return. The effect of bonus payments is to divide up this total return so that investors get 8.92% and taxpayers get the rest. It is clear that tracts drawing higher bonus payments turn out to be more beneficial to society: tracts with bids exceeding $3.25 million had an aggregate rate of return of nearly 20% not considering bonus payments. On the other hand, tracts receiving $.25 million or less yielded only 11% return. Note also in Figure 1 that the effect of bonus bids is to reduce the rates of return on high bid tracts disproportionately more than on low bid tracts. The result is that the rate of return when bonus payments are considered is almost the same for all intervals of bonus value.

Figure 2 also shows that rates of return, absent bonus, tend to be higher for tracts that drew more bids. Even more importantly, the bonus payments on high-competition tracts drive the rates of return lower than they do on low-competition tracts. This is clearly the desirable effect of competition that we seek to promote.

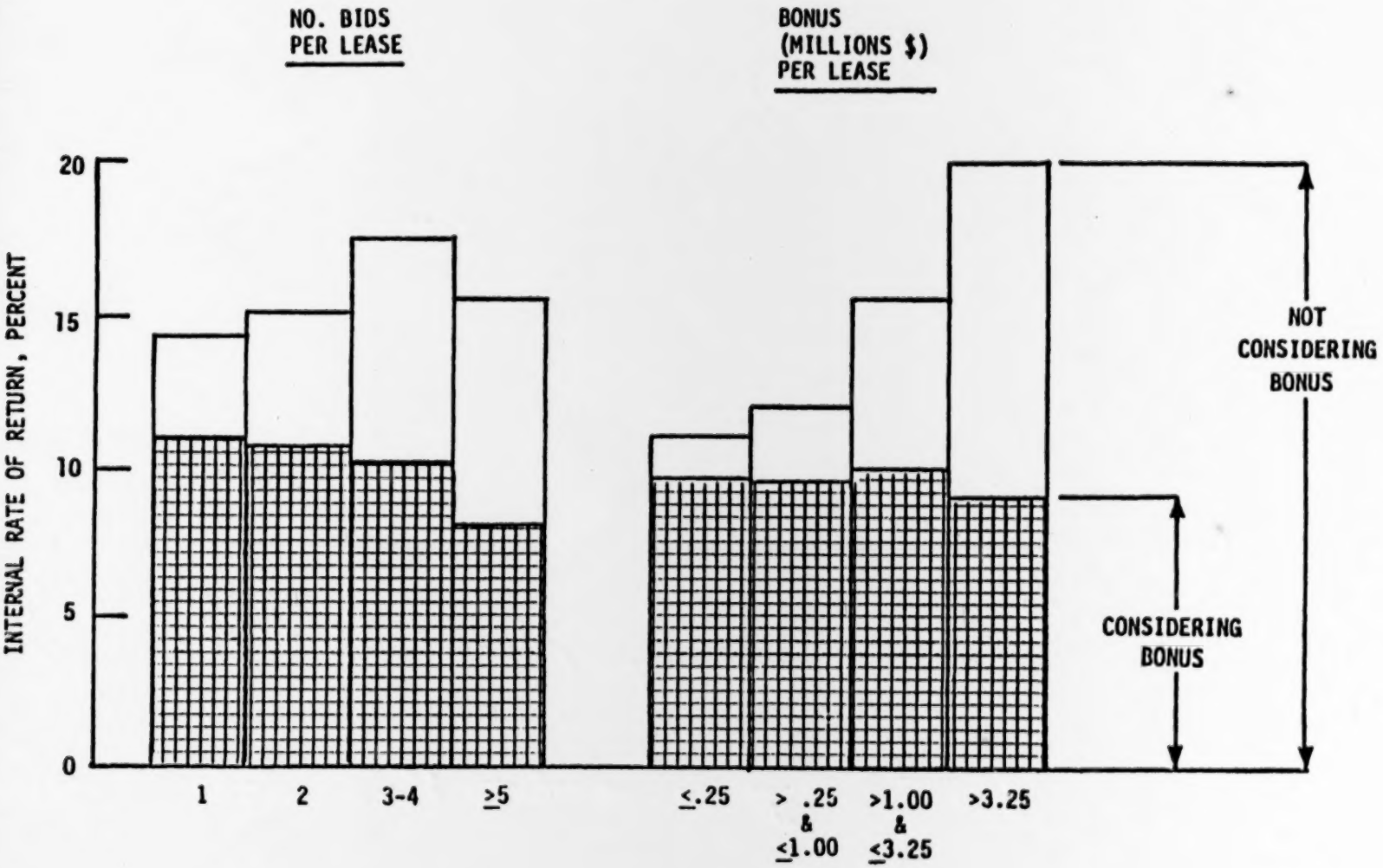


FIGURE 2

INTERNAL RATES OF RETURN FOR LEASES AGGREGATED ACCORDING TO NUMBER OF BIDS AND BONUS PER LEASE

Our analysis shows one other interesting trend. Rates of return, absent bonus, appear to be increasing somewhat on later leases. We would expect this trend to be sharper for post 1969 leases because of the escalation of the world price of oil. The rate of return, absent bonus, on leases now being awarded should be significantly higher. However, when bonus is considered, there is, if anything, a decline in the rate of return over time.

Our analysis has also examined rates of return for the aggregate of leases held by firms of different classes. Surprisingly enough, the Big 8 firms show lower return than smaller firms.* The aggregate rate of return for the Big 8 is 8.2% while the rest of the top 20 earns 11.1% as compared with firms not in the top 20 whose aggregate rate is 9.7%. As a whole, the Big 8 seem to do more drilling, get less production per well and less production per acre. These factors appear to contribute to their lower rate of return on OCS leases.

* * * * *

V. *Risk Sharing*

The patterns we have seen in bidding and rates of return demonstrate the risks of acquiring OCS leases. Our analyses of bidding behavior under various bidding systems has identified risk sharing as a potential source of improvement which is, to some extent, independent of the benefits from improved competition. It is evident from the discussion above that bidders under the cash bonus bidding system must risk and endure substantial losses of bonuses and exploration costs in order to find and reap the profits from the few tracts with reservoirs of oil and gas. For each tract, there is a substantial risk of loss to the winning bidder. For some bidders, large

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* For purposes of this analysis, the "Big 8" refers to the following set of firms: Amoco, Atlantic Richfield, Chevron, Exxon, Gulf, Mobil, Shell and Texaco. The rest of the top 20 include: Amerada Hess, Cities Service, Continental, Forest, Getty, Marathon, Phillips, Signal, Sun, Superior, Tenneco, and Union.

losses are more damaging per dollar than small losses. This is especially true for potential losses that could threaten the financial soundness of the firm or seriously disrupt its future investment plans.

Most of us would be willing to risk $1 for a lottery ticket with a 1-in-a-thousand chance of winning $1000. But we're less likely to risk $1000 on a lottery ticket with a 1-in-a-thousand chance of winning $1 million even though the jackpot and the ticket price have been scaled up by the same factor. Loss of $1000 is more than 1000 times more painful than loss of $1. Firms may exhibit the same sort of risk aversion in bidding large sums on the better prospects on the OCS. As a result, bonus bids would be reduced or discounted. We would expect this discounting to be more severe in the bids by smaller firms. Thus, if the risk confronted by bidders can be reduced, bids should increase, especially on better prospects, and smaller firms should be able to bid on a more even footing with larger firms.

The bidding systems on which we are focusing our efforts offer the best opportunities for shifting risks from the bidder to the government and the taxpayer. They do this by shifting government revenue from the up-front cash bonus to a form of payment which depends upon finding and producing the resource. Royalty bidding, sliding scale royalty and profit sharing systems all have this feature. Without discussing these systems in detail, it should be pointed out that they can have the potential effects on the "size of the pie" that are not desirable. High royalty rates can cause incentives to produce less oil and gas. And profit sharing, though it should help avoid such incentives, involves much higher administrative costs than other systems. We think the profit sharing system is the best opportunity for improvement. Our testing program is directed toward measuring in practice the gains in bidding and the costs of administering the system. We would like to report to you at future

meetings on our analysis of the performance of these systems, especially those we have tested in recent sales, and on our plans for bidding system tests in future sales.

VI. *Conclusions*

In summary, the statistics we have examined show that:

1. There is wide variation in and great uncertainty about the value of individual OCS tracts.
2. While competition can be improved, the resulting gains in assuring fair return to the public will probably be modest because much of the resource has been leased under moderate or strong competition.
3. Although rates of return are very high for a few tracts, the uncertainty about which tracts will yield such payoffs has prevented any firm or group of firms from reaping abnormally high profits overall.
4. Estimated rates of return have been substantially reduced by the payment of bonuses.
5. OCS holdings do not appear to be so highly concentrated as to offer substantial improvements in fair return from antitrust actions.
6. Risk sharing through new bidding systems offers a good opportunity to improve the return to the public from OCS leasing.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

Civil No. 79-1633

ENERGY ACTION EDUCATIONAL FOUNDATION, ET AL., PLAINTIFFS

v.

CECIL D. ANDRUS, ET AL., DEFENDANTS

AFFIDAVIT OF H. THEODORE HEINTZ, JR.

I, H. THEODORE HEINTZ, JR., having been duly sworn, state as follows:

1. I am an Economist serving as Assistant Director of the Office of Policy Analysis, U.S. Department of the Interior. I have been responsible for policy and economic analysis concerning a variety of OCS policies over the past four years. Along with other staff of the Office of Policy Analysis, I have been directly involved in the analysis of bidding systems and their performance and the development and testing of various bidding systems.

2. I have reviewed the two memoranda of the plaintiffs filed on June 28, 1979 and July 11, 1979, in support of their two motions for modification of this Court's order of June 27, 1979 (hereinafter referred to as the first and second memoranda). These memoranda are based on several improper assumptions from which plaintiffs draw incorrect conclusions about the capability of alternative bidding systems to assure receipt of fair market value for OCS oil and gas leases, and about the bidding results of OCS Lease Sale No. 48. Plaintiffs make several improper assumptions which I will explain below.

"FAIR VALUE" AND "FAIR MARKET VALUE"

3. Plaintiffs refer interchangeably to a statutory objective to obtain "fair value," "fair return", and "fair market value" for leases, e.g. first memorandum, p. 2; second memorandum, pp. 1-3, 6-8, 10-12. Plaintiffs even suggest that "fair market value" means a higher return than "fair return," second memorandum, pp. 7, 10. There is some confusion of terms in the statute and plaintiffs are simply attempting to exploit that confusion in their attack on the use of the bonus bidding-fixed royalty system.

4. The compensation required for OCS leases is a "fair and equitable return" to be determined by balancing other goals, such as making OCS oil and gas resources "available to meet the Nation's energy needs as rapidly as possible" and balancing orderly development with protection of the environment, 43 U.S.C.A. 1802 (2). The Conference Report on the 1978 amendments to the OCS Lands Act also confirms this standard. H. Rep. No. 1474, 95th Cong., 2d Sess. 79 (1978).

5. Neither the Act nor plaintiffs suggest a definition of the compensation the Department of the Interior must obtain for leases whether it is referred to as "fair value," "fair return", or "fair market value." In the absence of such a definition, it is necessary to understand how the value of a resource arises and how that value is related to the price that is paid for a mineral right to that resource.

6. Plaintiffs equate receipt of fair market value with capturing a high proportion of the value of the oil and gas produced. As a result, they favor royalty bidding and other high royalty systems. This reflects an inadequate understanding of the basic economic concepts of value which, if used as the basis for leasing policy, would cause substantial losses in revenue to the Federal government, as well as substantial losses in oil and gas production.

7. The central error in plaintiff's notion of fair market value is that the value of the oil and gas produced is all that need be considered. This would be correct if the Federal government were selling oil from storage tanks with negligible costs for delivery and meters to tell with certainty the amount of oil delivered. It is clearly not the correct concept for the sale of leases which convey mineral rights to a resource when substantial costs must be incurred to bring the resource to market and when the presence, extent, and quality of the resource are substantially uncertain.

8. The failure to consider costs and uncertainty is a major flaw in the analyses presented by plaintiffs which vitiates almost every statement they make about fair market value. The flaw in neglecting costs is easy to demonstrate. Even if it were certain that a tract contained recoverable oil and gas resources which could be sold for $500 million, no firm would pay $500 million for a lease conveying the mineral rights for that tract. Any firm acquiring such a lease would consider the costs it would be likely to incur at locating, extracting, and transporting the resources to market. If such costs amounted to $100 million, including taxes and normal return on investment, then clearly a firm would be willing to pay up to $400 million for the lease. Similarly, if costs were $400 million, then a firm would be willing to pay up to $100 million for the lease.

9. The seller of such a tract would clearly want $400 million in the first case or $100 milion in the second, since he could gain that much by incurring the costs and selling the produced resource himself. Economists call these profits which are above the normal return on investment the economic rent of the resources. If markets operated perfectly, including perfect knowledge about all of the factors that determine such economic rents, then market value and economic rent would be identical. Markets have many unavoidable imperfections, however, which make the fair market value less than the economic rent. In

OCS oil and gas development, the most important market imperfection results from the high investment costs of exploring and developing a tract and the unavoidable uncertainty about the presence and extent of the resource.

10. Thus it is clear that the market value of a lease depends as much on the costs as on the production revenues. Since both costs and resources vary from tract to tract and from area to area, it is impossible to draw valid conclusions about the receipt of fair market value based only on analysis of the aggregate of Federal receipts compared to the aggregate of production revenues.

11. In the sale of a lease, the bidding system determines the way in which the lessee will pay the lessor. At a fixed 16⅔% royalty on $500 million in production, the royalty payments would be $83.3 million in both examples provided above, regardless of costs. In a perfect market with no uncertainty, a competitive lease sale would capture all of the economic rent. This would leave $316.7 million for bonus if costs were $100 million and $16.7 million for bonus if costs were $400 million. The table below compares these two cases:

	$100 million costs	$400 million costs
Government's share of $500 million production revenue	80%	20%
Government's share of economic rent	100%	100%

It is clear from this table that even under theoretically perfect competition, the Federal share of production revenue from a cash bonus bid with fixed royalty depends directly upon the costs. Because of this, and the fact that many of the tracts offered in Lease Sale No. 48 will have relatively high exploration and development costs, no valid conclusions can be drawn from plaintiffs' analysis of the Federal share of production revenues from Lease Sale No. 48 tracts.

DISADVANTAGES OF ROYALTY BIDDING

12. Using this incorrect assumption about fair market value, plaintiffs wrongly conclude that higher royalty rates will assure receipt of fair market value by yielding higher Federal shares of production revenue, e.g. second memorandum, pp. 4-5, 9, 17, 19-20. Setting aside for the moment any effects on the number of bids or on risk averse bidding, higher royalties generally mean lower bonuses. The primary effect of higher royalty rates in the cases above would be to delay the receipt of Federal revenues by decreasing front end bonus payments and increasing royalties during the production phase. This in itself is not likely to improve receipt of fair market value.

13. There is a strong possibility, particularly under royalty bidding, of setting the royalty rate so high that the royalty payments would exceed the economic rent. When this occurs, it is impossible for the lessee to make a normal return on investment in development of the tract. In such cases, the high royalty rate prohibits development of the tract, the Federal government receives no royalties, and the country loses the oil and gas production that would have occurred at a lower royalty rate. This would result, for example, if the royalty rate on the $500 million of production were 25%. Following plaintiffs' concept, this would be assumed to yield $125 million in royalty payments. But if the tract would cost $400 million to explore, develop and produce, potential lessees would face a $25 million loss. Thus, the plaintiffs' estimate of the Federal share of production revenues under higher royalties that ignore costs are not only misleading with regard to fair market value, but they are also inherently overstated. In many cases, revenues would never materialize at high royalty rates.

14. Royalty bidding, which plaintiffs claim as proof that firms are willing to give the government a higher share of production value, is particularly damaging in this regard. Firms bid high royalty rates while paying minimal bonuses, because they are willing to gamble rela-

tively small bonus payments on the small chance that a reservoir is found that is big enough relative to its costs to produce economically, even at the high royalty rate bid. If a smaller reservoir is found that is uneconomical to produce at the high royalty rate, the firm has lost only its minimal bonus, but the Federal government has lost all royalty revenue and production has been foregone until the tract can be reoffered under lease terms that make production economical.

EFFECT OF PRICE INCREASES ON FAIR VALUE

15. Plaintiffs assert that fair value cannot be obtained without higher royalty rates because the price of the resource has increased dramatically since 1973, second memorandum, p. 8. This argument, however, fails to take into account the fact that the bonuses bid in a competitive situation will reflect current expectations of higher prices and transfer the resulting increases in value to the government. Even where prices far exceed these expectations at the time of the lease sale, it cannot be said that fair value was not received for the leases at the time they were issued, since neither the lessee nor the lessor anticipated the higher (or lower) prices at the time of the transaction.

NUMBER OF BIDS RECEIVED AS AN INDICATOR OF THE LEVEL OF COMPETITION IN OCS LEASE SALE NO. 48

16. Plaintiffs argue that the average number of bids per tract in Lease Sale No. 48 demonstrates an inadequate level of competition, second memorandum p. 14. However, this assertion ignores several important facts and relies on certain invalid assumptions.

17. An analysis of the data for Sale 48 (summarized in plaintiffs' Appendix A of the second memorandum) reveals some patterns in competition which refute plaintiffs' claims about the inadequacy of competition and the

effects of possible barriers to participation on receipt of fair market value. The results of this analysis are summarized in Table I (following page). Because geology dictates that oil is present in only a few tracts, averages over all tracts such as the average number of bids per tract can be misleading. Although the average for Lease Sale No. 48, 2.04, seems low, it is not a result of the asserted weakness in cash bonuses. In fact the average is held down by the high proportion of one-bid tracts, 56%, and two-bid tracts, 16%. Bonuses bid on these tracts were modest, averaging $2.1 million and $6.1 million, and accounting for only 8.1% and 11.1% of the total bids received. These bonus bids are not high enough to prohibit participation by any bidder capable of financing subsequent exploration and development. The low number on these tracts reflects limited prospects for discovery of oil and gas, not a failure of the bidding system to encourage competition. In fact, as documented in U.S. Exhibit No. 6, p. 5, experience shows that one- and two-bid tracts have proven to contain significantly less resource than tracts that receive more intensive bidding. For example, single bids account for 39% of all tracts leased in the 1954-1976 period, but account for only 19% of all production, U.S. Exhibit No. 6, Table 1.

18. It is also important to note that bidders on one-bid tracts behave as if they had competition because they have no way of knowing that no one else will bid. This results in the sale of leases on one-bid tracts for significantly more than would have been bid had the bidder been aware that he was the only bidder. In fact, bids of $38.7 million, $17.1 million, $10.3 million, and $8.2 million were received on one-bid tracts.

19. At the other end of the spectrum, 40% of all the money bid in Lease Sale No. 48 is on six- and seven-bid tracts. This intensive bidding had little effect on the average number of bids per tract because it was concentrated on only 6% of the tracts receiving bids. The relatively high levels of cash bonuses bid on these tracts, an aver-

Table I

Comparison of Bids Received in the 06/29/79

California Sale

Number of Bids Received Per Tract	Number of Tracts	% of Tracts	Average Bonus Bids	Total Amount Bid	% of Total Bid in Sale 48
1 bid	31	56	$ 2.6	$ 81.0	8.1%
2 bids	9	16	$ 6.1	$110.0	11.1%
3 bids	6	11	$ 3.0	$ 54.4	5.5%
4 bids	4	7	$13.2	$211.7	21.3%
5 bids	2	4	$13.1	$130.9	13.2%
6 bids	2	4	$30.0	$360.2	36.2%
7 bids	1	2	$ 6.6	$ 45.9	4.6%
Total	55	100		$994.1	100

age of $21.4 million, have evidently not prevented competition that is clearly of sufficient intensity to assure fair market value.

20. In conclusion, this analysis shows

(1) that on poor prospects, bonus levels are sufficiently low that they present little barrier to participation;

(2) that the likely amount of resource and potential revenue for poor prospects is quite low, thus the likelihood of losses in Federal revenue due to lower intensity of competition is also quite low.

(3) that bids reflect the bidders' expectations of competition even on one-bid tracts;

(4) that leases for the best prospects receive intense bidding even though cash bonuses are relatively high;

(5) that most of the potential resource is leased under intense competition for a relatively small portion of the tracts offered;

(6) that the average number of bids per tract is dominated by the much larger number of relatively poor prospects, thus giving rise to the misleading implication that most OCS oil and gas is leased under low competition.

21. Plaintiffs assert (second memorandum, p. 20) that the report offered as U.S. Exhibit No. 6 in hearings on their original motion *"has not the slightest bearing on the pending question whether the Government can be assured of receipt of fair market value from 1/6 royalty leases granted in 1979"* [plaintiffs' emphasis]. This is clearly an incorrect assertion. The Plaintiffs have asserted in their complaint (¶ 82):

> "The failure of the cash bonus, low royalty system to assure or achieve receipt of fair value has not resulted from a unique set of circumstances but is an inevitable consequence of the system itself."

This assertion is elaborated upon at numerous points in the complaint and subsequent memoranda. The studies

reported on in Exhibit 6 address this assertion directly with a detailed analysis designed to determine whether OCS lessees have been able to reap abnormally high profits for their leaseholds under cash bonus bidding with 1/6 royalty.

22. These studies, unlike the plaintiffs' analyses, were based on a clear and correct concept of fair market value, reflecting both production revenues and exploration, development, and production costs. If the 1/16 royalty, cash bonus bid system were inherently flawed so as to prevent receipt of fair market value, then the portion of the value which the government failed to capture in bonuses and royalties would show up as surplus profits to lessees. The studies examined internal rates of return, a widely used indicator of the profit from investments. This measure is directly relevant to the receipt of fair market value by the government because any significant pattern of failure to receive fair market value will cause internal rates of return on OCS leases to increase to abnormal levels. Careful estimates were made of production revenues and costs, based on the actual drilling and production data for 1223 leases issued from 1954 through 1969. Internal rates of return for various categories of leases were calculated using these estimates and actual bonus and royalty payments. No pattern of abnormally high rates of return was evident in the estimates calculated in these studies. Rates of return in the range of 8 to 10% are clearly not exceptional. Thus these 1223 leases issued under the cash bonus, 1/6 royalty system do not demonstrate any inherent failure of that system to provide fair market value.

23. Plaintiffs misstate the paper's conclusion concerning one pattern that was evident, namely increases in the social rate of return on later leases. The conclusion did not address "company rates of return" as stated on page 21 of the second memorandum but "rates of return, absent bonus," which had been described in the preceding

paragraph of the paper as "society's rate of return" (U.S. Exhibit No. 6, p. 11). Society's return should, in fact, increase as the prices of oil and gas increase, because the resource is becoming more valuable. On the other hand, the company rates of return should not be higher on leases issued when oil and gas prices are higher if the bidding system is adequately capturing fair market value. The fact that "when bonus is considered, there is, if anything, a decline in the rate of return over time" to the company (U.S. Exhibit No. 6, p. 12) confirms that the cash bonus bid, 1/6 royalty system was performing properly in response to price increases and other changes during that period. Contrary to plaintiffs' assertion (footnote on p. 21 of the second memorandum), the paper contains no implication regarding performance after 1969, except that no "inherent weakness" in the cash bonus bid, 1/6 royalty system was evident. Mr. Donkin's calculation of the declining Federal share, as has been demonstrated above, is not relevant to the issue of fair market value because it fails to reflect the effects of costs on value.

24. Staff members of the Office of Policy Analysis, of which I am the Assistant Director, have carefully reviewed and followed the literature in the economic profession on the performance of bidding systems. To my knowledge, this rigorous test of the performance of the cash bonus bid, 1/6 royalty system has not been refuted by any analysis of similar detail and economic validity. On the other hand, a wide variety of both theoretical and empirical studies have shown that this system, while not perfect, does not exhibit the inherent weakness which plaintiffs assert. Improvement may be possible through cash bonus bidding with a fixed profit share as stated in U.S. Exhibit No. 6. However, a theoretical indication of possible improvement is a far cry from empirical proof of inherent weakness.

ANALYSIS OF EFFECTIVE FEDERAL SHARE IN OCS LEASE SALE NO. 48

25. Plaintiffs allege to have calculated that the government's effective share of oil and gas production value in leases receiving bids at OCS Lease Sale No. 48 will be 28.5%, second memorandum, p. 16. Not only does this calculation fail to take into consideration costs which may vary considerably according to the tracts (supra, ¶¶ 7-11), but it is based on the assumption that the average yield from OCS leases issued between 1954 and 1970 will be the average yield from leases awarded at OCS Lease Sale No. 48, second memorandum, p. 16, fn. 2. This assumption disregards the inherently risky nature of oil and gas exploration. More important, it ignores the fact that between 1954 and 1970 the United States issued leases in the most promising areas for oil and gas production, and we will be exceedingly lucky if the same quantities of oil and gas are discovered on leases issued after 1970. Throughout this litigation plaintiffs have relied on this false assumption that oil and gas can be expected to be discovered in the same quantities on leases issued before and after 1970, e.g. second memorandum, pp. 5, 8.

26. Plaintiffs' calculations (second memorandum, p. 16), in addition to being based on an invalid concept, are incorrect in several respects. Plaintiffs purport to calculate "present value" of resource production and royalties. They do not. They have merely calculated gross values in 1978 dollars ignoring the effect of the time value of those resources over the extended times and production, generally estimated at 20 years. At the standard 10% government discount rate used for calculating present value, the present value of OCS oil and gas production is about 39% of its gross value. This correction alone would require multiplying the plaintiffs' estimate of present value of production in line 4 and the present value of

royalties in line 5 by 0.39. With these corrections, the effective government share (line 9) becomes 47.0% rather than 28.5%.

27. Also, as plaintiffs admit, prices have increased. In evaluating Lease Sale No. 48 tracts, the Department of the Interior is using $21.59/barrel to reflect the effect of recent OPEC price increases on future oil prices. This is equivalent to $3.67/MMBtu. The net result, using plaintiffs' analysis (invalid though it is), is an effective government share of 35%. (Since the price expectation is in 1979 dollars, line 6 can be used instead of line 7.)

28. Of course the plaintffs' calculations are highly optimistic about the resource prospects for these tracts. It is just as reasonable to assume that the 1/6 royalty tracts in Lease Sale No. 10 will be only 75% or 50% as productive as tracts leased in the 1954-1970 period. These assumptions yield effective government shares of 41% and 53% respectively.

HIGH CONCENTRATION OF BIDDERS IN LEASE SALE NO. 48

27. In asserting that the resuts of Lease Sale No. 48 show that the major oil companies continue to dominate under a cash bonus, 1/6 royalty bidding system, plaintiffs cite certain statistics in a very misleading manner, second memorandum, p. 12. They state that the eight major oil companies "submitted the high cash-bonus bids on 75 percent of the tracts bid." However, this figure represents all high bids in which majors participated and fails to point out that many of these high bids were submitted by joint ventures which included one or more smaller companies. As stated by plaintiffs, the 75% figure appears to mean that only 25% of the high bids were submitted by non-majors. However, the results of Lease Sale No. 48 show that smaller, non-major companies participated in (or "submitted" in the plaintiffs' words) the

high cash-bonus bid on 67% of the tracts bid, see second memorandum, Appendix A, p. 2.

/s/ H. Theodore Heintz, Jr.
H. THEODORE HEINTZ, JR.
Assistant Director, Office of
Policy Analysis
U.S. Department of the Interior

Subscribed and sworn to before me, this 17th day of June 1979.

Notary Public

My commission expires (illegible).

IN THE UNITED STATE DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

STATE LANDS COMMISSION OF CALIFORNIA;
ENERGY ACTION;
THE CITY OF LONG BEACH, CALIFORNIA; ET AL.

v.

UNITED STATES, ET AL.

DISTRICT OF COLUMBIA)
) ss.
CITY OF WASHINGTON)

AFFIDAVIT OF GEORGE L. DONKIN

The affiant, GEORGE L. DONKIN, having been duly sworn, states as follows:

My name is George L. Donkin. I am the same George L. Donkin who prepared and submitted with this Court an Affidavit, with accompanying exhibit numbers 1-10, on June 20, 1979. A summary of my professional experience and qualifications is presented in Exhibit 1 to my June 20, 1979 Affidavit.

Exhibit 1 to this Affidavit summarizes my estimate of the Federal Government's effective share, including bonuses, of the total production value from OSC leases sold during the period 1975 through 1978 where the royalty payments to the government have been established on the basis of a fixed, one-sixth share of total production value. Exhibit 1 shows that, over the life of the one-sixth royalty leases sold during 1975-1978, total revenues received by the government—in discounted, constant 1978 dollars—will approximate 23.6 percent of the total production value attributable to those leases. This estimate is based upon the following assumptions:

- That the average oil and gas production yield per acre on one-sixth royalty leases sold during 1975-

1978 will equate to the average yield per acre associated with Gulf of Mexico OCS leases sold during 1954-1979 (i.e., .0101 Quadrillion Btu per acre); and

- That the average price, in discounted 1978 dollars, associated with production from fixed, one-sixth royalty leases sold during 1975-1978 will approximate $2.10 per million Btu.

The .0101 Quadrillion Btu per acre yield estimate is derived from Exhibits 2 and 3 of my June 20, 1979 Affidavit.

The average price assumption of $2.10 per million Btu, in discounted 1978 dollars, derives from the following current Department of Energy price forecasts:

- 1990 U.S. crude oil prices, in 1978 dollars, of $18.50 per barrel; this equates to $3.08 per million Btu, or $2.16 per million Btu in 1978 dollars at a 3.0 percent discount rate.
- 1985 new natural gas prices, in 1978 dollars, of $2.76 per 1000 cubic feet; this equates to $2.24 per million Btu in 1978 dollars at a 3.0 percent discount rate if an average heat content of 1000 Btu per cubic foot of gas is used.

The calculations presented in Exhibit 1 and in my June 20, 1979 Affidavit show a continuous decline, with respect to time, in the effective government share of total production values from fixed, one-sixth royalty leases sold during the period 1954 through 1978. The cause of this secular decline in the government's net effective share is the dramatic increases in oil and natural gas prices since 1973 and further price increases which are projected to occur in the future. These price increases result in a long-term diminution of the present value of lease bonuses, relative to total production values received by the oil and gas producing industry over the life of the fixed, one-sixth royalty leases.

With respect to leases where a large percentage of their ultimate production took place during the 1960's and early 1970's, the observed, net effective government share is much larger than that which will be realized on post-1970 leases. This is because a very large percentage of the production from post-1970 leases will be sold at substantially higher, deregulated world energy prices during the late 1970's and the years thereafter. This is demonstrated by my calculations showing that:

- Leases sold between 1954 and 1969 returned approximately 35 percent of their total production value to the United States, and the inclusion of the 1970 leases reduced the government's share for the period 1954-1970 to 34 percent.
- 1970 leases will yield only a 30 percent net government share.

  The 1971-1977 leases will yield only a 27 percent share if they ultimately produce an aggregate yield per acre equivalent to the yield on acreage leased from 1954 to 1970.
- The government's share for leases sold during the last four years (1975-1978) declines to 23.6 percent, again assuming a yield per acre equivalent to the yield on the earlier leases.

My overall conclusion is that, as a result of sharply escalating oil and natural gas prices in recent and future years, every year of leasing under the cash bonus and one-sixth royalty system has produced a diminishing effective return to the United States.

Exhibit 1 attached hereto.

I hereby declare under penalty of perjury that the foregoing statement is true and correct.

DATED this 27th day of June, 1979.

/s/ George L. Donkin
GEORGE L. DONKIN

EXHIBIT 1

Estimated Effective Government Share of Total Production Value From One-Sixth Royalty OCS Leases Sold During the Period 1975-1978 If Productivity Per Acre Equals Average Productivity Per Acre From OCS Leases Sold During the Period 1954-1970

	Acreage	Bonuses In $1000	Present Value of Bonuses In 1000's of 1978 Dollars
1975	1,679,877	$1,088,133	$1,422,256
1976	1,277,936	2,242,898	2,705,568
1977	930,074	1,558,581	1,724,143
1978	932,168	1,234,698	1,234,698
	4,820,055	$6,124,310	$7,086,655

Estimated Oil and Gas Production in Quadrillion Btu per Acre	.0101
Estimated Oil and Gas Production in Quadrillion Btu	48.7
Present Value of Oil and Gas Production in 1000's of 1978 Dollars at Deflated 1978 Price of $2.10 per MMBtu	$102,270,000
Present Value of Royalties @ One-Sixth of Production Value	$17,045,000
Present Value of Government Share (Royalties Plus Bonuses)	$24,131,665
Government Share As a Percent of Total Production Value	23.6%

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

Civil Action No. 79-1633

ENERGY ACTION EDUCATIONAL FOUNDATION, ET AL., PLAINTIFFS

v.

CECIL D. ANDRUS, SECRETARY OF INTERIOR, ET AL., DEFENDANTS

MEMORANDUM AND ORDER

This Court has considered Plaintiffs' Motion for a Preliminary Injunction, the Opposition thereto, the oral arguments of Counsel and the entire record herein. Plaintiffs have failed to make the requisite showing which would justify this Court's granting their request for preliminary injunctive relief. *See WMATA* v. *Holiday Tours*, 559 F.2d 841 (D.C. Cir. 1977); *Virginia Petroleum Jobbers Association* v. *F.P.C.*, 259 F.2d 921 (D.C. Cir. 1958). In particular, Plaintiffs have not shown a likelihood of success on the merits.

The Outer Continental Shelf Lands Act requires that the cash bonus-fixed royalty bidding system provided for in 43 U.S.C. § 1337(a)(1)(A) be applied to 40-80% of the acreage offered for leasing, while other alternative bidding systems listed in 43 U.S.C. § 1337(a)(1) be applied to 20-60% of the acreage. 43 U.S.C. § 1337(a)(5)(B). The legislative history of the Act clearly reveals that the Secretary *shall* utilize the alternative bidding system so as "to assure that adequate information is obtained as to relative advantages and disadvantages of the various bidding systems . . . ." House Conference Report No. 95-1474, 95th Cong., 2d Sess. 92 (1978), *reprinted in* [1978] U.S. Cong. & Ad. News 1674, 1691. Only two of the alternative bidding systems (other than the cash bonus-fixed royalty bidding system) have been

employed since the 1978 Amendments to the Outer Continental Shelf Lands Act were enacted. However, the nine month delay in promulgating regulations designed to implement the other alternative bidding systems,[1] although lengthy, is not arbitrary and capricious in light of the complexity and sensitivity involved in preparation of such regulations. *See* H.R. Rep. No. 95-1835, 95th Cong., 2d Sess. 25 (1979).

Moreover, Plaintiffs have failed to show that utilization of the cash bonus-fixed bidding system with a 16⅔% fixed royalty violates the purposes underlying the Act, set forth at 43 U.S.C. § 1802. *See* H. Heintz, Jr., Patterns of Bidding, Rates or Return and Ownership for OCS Oil and Gas Leases (Dec. 15, 1978) (Defendants' Exhibit No. 6); U.S. Dept. of Energy, Report to Congress on Various Bidding Options Utilized in FY-78 Lease Sales on the Outer Continental Shelf (Defendants' Exhibit No. 7).

Finally, this Court notes that the 1978 Amendments provide a scheme of Congressional oversight with respect to the use of various bidding options. *See, e.g.*, 43 U.S.C. §§ 1337(a)(8), (9). The Congressional safe-guards serve to protect the public interest.

For the reasons discussed above, it is by the Court this 27th day of June, 1979,

ORDERED, that Plaintiffs' Motion for a Preliminary Injunction is hereby DENIED.

/s/ Aubrey E. Robinson, Jr.
United States District Judge
AUBREY E. ROBINSON, JR.

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[1] Promulgation of regulations implementing a bidding system is a prerequisite to employment of that system. 43 U.S.C. § 1337(a)(1).

REPORT TO THE CONGRESS

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

[SEAL]

OUTER CONTINENTAL SHELF SALE 40—INADEQUATE DATA USED TO SELECT AND EVALUATE LANDS TO LEASE

Department of the Interior

The Interior Department selected Outer Continental Shelf oil and gas tracts for leasing without obtaining enough information to determine their potential resources. Similar problems were discussed in GAO's report on Outer Continental Shelf Sale 35.

Overall, industry bidding was greater in Sale 40 than Sale 35. The larger amount of money bid in Sale 40, however, gives no assurance that the best areas were offered or that energy resources will be found.

Interior should direct an exploration program to develop and implement a plan for appraising Outer Continental Shelf Oil and gas resources.

* * * * *

DIGEST

More and more the Nation is relying on the Outer Continental Shelf leasing program as a way to increase our domestic oil and natural gas production. Decisions on where to lease and at what rate will greatly affect whether the Nation can decrease its reliance on foreign energy supplies and have enough energy resources to meet near-term needs.

The Department of Interior's policy of leasing Outer Continental Shelf lands that have not been properly evaluated (because of insufficient data) encourages industry to speculate in lands believed to contain no or minimal resources and does not guarantee that the Government receives the fair market value for these leased resources.

To prevent this, the leasing program should be designed to offer the best acreage after it has been adequately explored for resources.

In Sale 40, held on August 17, 1976, 154 oil and gas tracts were offered for lease off the coast of Delaware, Maryland, and New Jersey (called the Baltimore Canyon). The tracts were offered to the highest industry bidders, who are required to develop tracts for oil and gas. The bonus revenues received from the leased tracts were about $1.1 *billion.* (Bonus revenues are initial payments at time of lease, apart from the percent of production payments the Government later receives.)

SELECTING AND EVALUATING TRACTS

Interior selected tracts for lease after reviewing limited and insufficient data and before assessing the true resource developmental potential of the land. (See pp. 12 and 20.)

Before actual sale, each tract is assigned an evaluation of its worth to determine the acceptability of industry bids and to help assure the Government receives a fair market value return for the lease of public resources.

As with Sale 35, Sale 40 evaluations were unreliable—made without enough data. Interior had less overall information to use in evaluating Sale 40 than it did for Sale 35. (See p. 22.)

INDUSTRY BONUS BIDDING

The best measure of a sale's success is not the total bonus dollars received from holding a sale but the ultimate discovery and production of oil and natural gas.

For example, the total bonus revenues received from Sale 32 in 1973 were about $1.5 *billion,* but resources have not yet been found. The resource potential of the Sale 32 area is questionable. Getting more geologic knowledge before a sale may reduce industry's willingness to pay

high bonuses, but it will provide better knowledge of the resource potential and aid in selecting areas to be leased.

AGENCY COMMENTS

Because of the need to issue the report before passage of pending Outer Continental Shelf legislation, the Department was unable to formally comment in writing within the given timeframe. GAO did, however, discuss the report's recommendations with Department officials. These officials told GAO that the Department's views on the recommendations in the Sale 35 report as stated in the June 13, 1977, letter from the Under Secretary of the Interior to Chairman Ribicoff, Senate Committee on Government Operations could be considered representative of their views on GAO's recommendations in this report. (See app. V.)

RECOMMENDATIONS TO THE SECRETARY OF THE INTERIOR

The Secretary of the Interior should direct a geological exploration program which has a systematic plan for appraising Outer Continental Shelf oil and gas resources, including selected stratigraphic test drilling. The plan should identify the level of stratigraphic drilling necessary to provide a minimal level of data on major shelf areas.

After the plan has been developed, the Secretary should encourage private industry to explore areas identified in the plan and confidentially share with Interior the information developed. Exploration permits issued by the Department for private drilling should provide the opportunity for any bonafide potential bidders to "buy-in" on the exploration by equally sharing the cost of the drilling.

After Interior knows what land industry has explored and how thoroughly it was explored, if any data is still needed, the Department of the Interior should take nec-

essary actions, including public financing of stratigraphic drilling, to obtain it.

In addition, after the tracts have been selected the process outlined above should be repeated to obtain more reliable data for prelease evaluation purposes if deemed necessary.

Interior's Geological Survey and Bureau of Land Management should be required to consider all necessary information and to make final corrections to tract values before lease. Then, the Department should offer for lease only those areas for which it has collected and analyzed sufficient information to adequately identify where the resources are, their estimated value, and potential for development in the near future.

* * * * *

Major oil companies (companies with average daily production of crude oil, natural gas, or liquefied petroleum products exceeding 1.6 million barrels worldwide) were prohibited in Sale 40 from joint bidding with each other. Nine oil companies met this criteria for Sale 40 and were classified as majors. These companies, however, are not prevented from joint bidding with non-major oil companies.

An analysis of the bidding results for the 13 higher royalty tracts leased showed that the 5 major companies which successfully bid retained about a 55 percent interest.[1] The remaining 45 percent interest in these tracts was split among the 20 other successful bidders. In comparison, the majors retained about a 45 percent interest in the 1/6 royalty rate tracts.

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[1] It should be noted that this percentage will vary depending on the definition of a major oil company. For Sale 40, the majors were (1) Amoco Production Company, (2) BP Alaskan Exploration, Inc., (3) Chevron Oil Company, (4) Exxon Corporation, (5) Gulf Oil Corporation, (6) Mobil Oil Corporation, (7) Shell Oil Company, (8) Standard Oil Company of California, and (9) Texaco, Inc. Other large companies not considered a major for this sale successfully bid on these tracts.

COMPETITION IN SALE 40

The competition in Sale 40 was greater than in Sale 35, however, there was still a significant proportion of one and two bid tracts as the following table shows.

	Total tracts receiving bids		High royalty rate tracts	
Number of bids on each tract	Number of tracts	Percentage	Number of tracts	Percentage
1	28	27.7	—	—
2	21	20.8	1	6.7
3	7	6.9	—	—
4	5	5.0	—	—
5	4	4.0	1	6.7
6	5	5.0	2	13.2
7	8	7.9	1	6.7
8	15	14.8	7	46.7
9	7	6.9	3	20.0
10	1	1.0	—	—
Total	101	100.0	15	100.0

Seventy percent of the tracts in Sale 35 receiving bids got only one or two bids. For Sale 40, about 49 percent of the tracts bid on got one or two bids. Other factors also show increased competition for Sale 40 over sale 35 as follows:

—a much larger percentage of tracts offered in Sale 40 were bid on than in Sale 35 (66 and 30 percent respectively), and

—the average number of bids for each tract was much greater for Sale 40 than Sale 35 (an average of 4.1 bids and 2.4 bids for each tract respectively).

We continue to believe, however, that the high percentage of one and two bid tracts in Sale 40 still indicates inadequacies in sale competition. As stated in our Sale 35 report, a competitive leasing program is based on the

premise that competition will provide a fair market value. When competitive conditions do not exist, however, it becomes increasingly important to have reliable tract values to use as the basis for accepting or rejecting bids. When large percentages of the total tracts in a sale receive one or two bids per tract or are minimally valued, speculation can be a strong incentive.

We also analyzed the distribution of bids for one and two bid tracts. We found that 42 of the 49 tracts were leased and 41 were minimally valued by Survey at $25 an acre. The other seven tracts were not leased and were valued above minimum. The following table shows that many of the bids were very close to the minimum value. Thirty of the 58 bids were under $60 an acre (20 of these 30 bids were under $38 an acre). Overall, the average high bid for these 42 tracts was about $340 an acre. The average high bid for all other tracts leased (tracts with three or more bids) was more than 10 times greater—$3,605 an acre. We believe these statistics indicate that speculation was a strong motivating force in bidding in many of these tracts. Although Sale 40 did generate better competition than Sale 35, we continue to believe that greater competition on the OCS is needed.

BY THE COMPTROLLER GENERAL
REPORT TO THE CONGRESS
OF THE UNITED STATES

Lower Cook Inlet—Another Example of More Data Needed for Appraising Outer Continental Shelf Oil and Gas Resources

The Chairman, House Ad Hoc Select Committee on the Outer Continental Shelf, requested GAO to review the Lower Cook Inlet oil and gas lease sale held October 27, 1977, in Anchorage, Alaska.

The Department of the Interior selected and evaluated Outer Continental Shelf oil and gas tracts for leasing without obtaining enough information to determine their potential resources.

Interior should direct an exploration program which has a systematic plan for appraising Outer Continental Shelf oil and gas resources including selected stratigraphic test drilling.

[SEAL]

* * * * *

About 60 percent of the tracts in Sale CI receiving bids got only one or two bids. For Sale 35 and Sale 40 respectively, about 70 percent and 49 percent of the tracts bid on got one or two bids.

Other facts regarding the relative competitiveness of these sales are:

—A larger percentage of tracts in Sale CI were bid on than in either Sale 35 or Sale 40 (67 percent of the tracts were bid on in Sale CI, 66 percent for Sale 40, and 30 percent for Sale 35). (See table on p. 4.)

—The average number of bids for each tract in Sale CI was greater than Sale 35 but less than Sale 40 (an average of 2.6 bids per tract for Sale CI, 4.1 bids per tract for Sale 40, and 2.4 bids per tract for Sale 35).

The high percentage of one and two bid tracts in Sale CI is, to us, the primary indicator of inadequate sale competition. As stated in our Sale 35 and Sale 40 reports, a competitive leasing program is based on the premise that competition will provide a fair market value return. When competitive conditions do not exist, however, it becomes increasingly important to have reliable tract values to use as the basis for accepting or rejecting bids. When large percentages of the total tracts in a sale receive one or two bids per tract and are minimally valued based on poor information, there can be no assurance that the public received a fair market value return for the potential resources leased.

We also analyzed the distribution of bids for one and two bid tracts in Sale CI. We found that 52 of the 55 tracts receiving one or two bids were leased. Fifty of these leased tracts were minimally valued by Survey at $25 per acre under the cash bonus bidding system or $25 per acre fixed bonus with less than a 16⅔ percent royalty rate under the royalty bidding system. The remaining five tracts were valued above the minimums. Of these five, two were leased and three were not leased due to bid insufficiency."

The following table shows that many of the leased tracts receiving one or two bids under the cash bonus system (royalty bid tracts are excluded) were valued by industry close to Survey's minimum. Thirty-two of the 54 industry bids (about 59 percent) were under $61 an acre (23 of the 54 one or two bids were under $41 per acre). The average high bid for all 38 tracts leased under the cash bonus system receiving one or two bids was $489 per acre. The average

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The results of the uncertainty of the potential value of tracts may cause industry to tie up capital in lands with minimum or no resource potential or buy very good lands

for less than fair market value. Until these tracts are further explored and potential resources are developed, no one knows whether the capital sunk into these tracts was excessive or, conversely, will provide a sizeable return for the investment.

CONCLUSIONS

Our review of the Sale CI indicates, as it did for Sale 35 and Sale 40, that the Department had limited data with which to value tracts. We believe this for the following reasons:

—There was less overall information for Sale CI than Sale 35 but more than Sale 40. There was only one deep stratigraphic test off-structure for Sale CI.

—The reliability rating of the tracts in Sale CI was "D," which is the same as the Sale 35 "D" rating and basically equivalent to the "E" rating in Sale 40. The ratings show that, at best, only one of the three parameters necessary for resource evaluation could be identified (structures) by seismic data.

—The competition in Sale CI was better than in Sale 35 but less than Sale 40. There were still a significant number of tracts (60 percent) getting one or two bids each in Sale CI, as compared with 70 percent for Sale 35 and 49 percent for Sale 40. In these kinds of non-competitive situations, where bidding is not heavy, it is important for Survey to have the best possible geological and geophysical information to protect the public interest.

—The differences in values assigned by Survey and by industry to the minimum value tracts leased differed by an average of more than 1,900 percent for the tracts offered under the bonus bid system.

RESPONDENTS REPLY MEMO IN THE DISTRICT COURT, DATED JULY 14, 1980

* * * * *

1. *Public Returns-Producer Plaintiffs*

The first major injury resulting from defendants' course of conduct addressed in the Complaint is the reduction of public revenues, and the corresponding increase in profit to the oil companies as lessors, which is caused by continued 16⅔% royalty leasing and by the failure to implement variable profit share leasing as a means of maximizing public returns (see p. 11, n. 7, *supra*). The California plaintiffs in this case (the State Lands Commission and the City of Long Beach) are lessors and producers of oil in competition with the United States, which leases oil on properties on the Outer Continental Shelf including various West Coast locations.[8] These producer-plaintiffs suffer concrete and tangible injury from defendants' failure to implement leasing systems that would improve the public returns from OCS leasing and reduce the returns for lessees. As set forth in paragraph 132 of the Complaint, California plaintiffs are now uncertain of their future offshore leasing capacity, of production on their own existing leases, and of future profits on those leases. This is because California has leased, and intends to continue to lease, its offshore oil lands under profit share arrangements yielding the State nearly a 50% share of revenues from the oil and gas recovered (see Complaint, ¶¶ 71-72), wehreas the United States is continuing to lease on the basis of a 16⅔% royalty which, even with cash bonuses included, represents a net federal share of less than 30%. See Affidavit of George L. Donkin, sub-

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[8] The 1978 Amendments were specifically intended to take the interests of coastal states into account, in contrast to earlier years where the interests of the oil companies had clearly been predominant. *See, e.g.*, H.R. Rep. No. 95-590, 95th Cong., 1st Sess. 54 (1977).

mitted at July 17, 1979 hearing. Clearly, oil companies will be disinclined to continue to bid high profit shares for California leases or to produce on the existing leases, and will be unwilling or unable to provide revenue to California at equivalent rates of profit if the Federal Government continues to make available enormous quantities of oil on which the producer retains not 50% of production but 70% and more. Indeed, the truth of this proposition has recently been conceded by the Government's chief economist Heintz, in answer to questions concerning the effect of possible differences in offshore oil royalty obligations:

> "Q Let's say you established a system that produced a 5 percent profit, was expected to produce a 5 percent return on investment for oil companies and England had a system that produced a 20 percent return. Do you think that—
> A I think we would expect to see a decline in participation of firms who have opportunities in England in the United States OCS program.
> Q Why is that?
> A *Any rational businessman with a choice between some investments that yield 20 percent and some that yield 5 percent will always choose the 20 percent . . . .*" (Exhibit 9) (emphasis added).[9]

Moreover, apart from these manifest injuries to California producer-plaintiffs when the Federal Government leases OCS property on terms yielding far smaller returns to the public and thus greater returns to the companies, there is also direct monetary injury to the California plaintiffs in "drainage" situations. Drainage sites place California in the role of a co-participant with the United States in royalties received from pumping at the

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[9] It is well-established that "private competitive injury" is a sufficient basis for standing. Schlesinger v. Reservists Committee to Stop the War, 418 U.S. 208, 223 (1974); Association of Data Processing Service Organizations v. Camp, 397 U.S. 150 (1970).

Federal end of an offshore reservoir where the State is a part owner of the terrain (43 U.S.C. § 1337(g)). Thus, on Lease Sale 48 last June, the United States negotiated with the State for an agreement for such joint participation in the royalty returns received from the companies. Clearly, the State is being financially injured under these circumstances by the fact that the Federal leases are let on the basis of an unduly low royalty rate and without recourse to use of new systems that would maximize the public return from leasing both to the Federal treasury and to the State treasury under a drainage agreement.

* * * * *

APPENDIX B

RESPONDENTS' REPLY MEMO OF JULY 14, 1980

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

ENERGY ACTION EDUCATIONAL FOUNDATION, ET AL.

v.

CECIL D. ANDRUS, ET AL.

DISTRICT OF COLUMBIA)
) ss
CITY OF WASHINGTON)

AFFIDAVIT OF GEORGE L. DONKIN

The affiant, GEORGE L. DONKIN, having been duly sworn, states as follows:

My name is George L. Donkin. I am the same George L. Donkin who prepared and submitted with this Court a number of Affidavits during the spring and summer of 1979. A summary of my professional experience and qualifications is presented in Appendix A to this Affidavit.

The 1978 amendments to the Outer Continental Shelf Lands Act mandate that "[l]easing activity shall be conducted to assure receipt of fair market value" for the petroleum and natural gas resources found and produced at OCS leases in the federal domain (Section 18(a)(4). At that time, Congress expressly authorized recourse to several diverse leasing systems, including profit-sharing. These diverse leasing systems were to be used as alternatives to the variable cash-bonus, fixed one-sixth royalty bidding systems which have been used by the Department of Interior in nearly all federal OCS lease sales since 1954. Congress also reaffirmed that any federal leasing

system must promote competition and a hieve rapid development of oil resources on the OCS.

In my view, with world petroleum markets as unsettled as they have been in recent years, the variable cash-bonus, fixed one-sixth royalty bidding system cannot possibly assure that the government obtains fair value for the oil and gas resources located at OCS leases in the federal domain. Indeed, if unanticipated world oil or natural gas price increases occur, as has been the experience throughout the 1970's, the variable cash-bonus, fixed royalty leasing system virtually guarantees that the government will obtain less than fair value for its hydrocarbons resources in the offshore federal domain.

In June 20, 1979 affidavit, I presented the following estimates of the government's effective share of production value from OCS leases in the Gulf of Mexico sold during the period 1954-1970 (see Exhibit 4 of June 20, 1979 Affidavit):

(1) 21.2 percent of total production value, in nominal dollars;

(2) 27.8 percent of total production value, in constant dollars; and

(3) 34.0 percent of total production value, in constant 1978 dollars and discounted to reflect the time value of money.

Similarly, in my June 27, 1979 Affidavit, I showed that the effective government share of total production value for OCS leases sold during the period 1975-1978 will be substantially less (i.e., only 23.6 percent) than that associated with leases sold prior to 1971. Indeed, I concluded in my June 27, 1979 Affidavit that "as a result of sharply escalating oil and natural gas prices in recent and future years, every year of leasing under the cash bonus and one-sixth royalty system has produced a diminishing effective return to the United States."

The effective government share of total production value for OCS leases has exceeded the fixed 16⅔ royalty rate because the government has attempted to obtain fair value in the up-front cash bonuses offered by the oil and gas companies bidding on these properties. This historical practice of requiring a combination of cash bonus and one-sixth royalties is clear evidence that 16⅔ percent of the production value is less than the fair value of OCS leases in the federal domain. Otherwise, the government would have been willing to accept cash bonus bids of zero dollars and oil and gas companies would not have been willing to bid more than the one-sixth royalty rate on OCS leases sold since 1954. It follows, therefore, that 16⅔ percent of production value is less than the fair value of oil and gas resources located at OCS leases in the federal domain.

When it is recognized that a fixed one-sixth royalty rate is less than fair value, it becomes clear that the cash-bonus, 16⅔ percent royalty bidding system cannot possibly assure fair value. This is because the government's share of any windfall gains resulting from dramatic and unexpected increases in oil and gas prices remains limited to the fixed, one-sixth royalty rate which, as was shown above, represents less than fair value. It was precisely for this reason that former Secretary of the Interior Morton stated in 1975 that any bidding system must "insure receipt of fair farket value" and "we really don't get true value if, at the time the bonus is paid, oil is selling for $5 and then it goes up to $10. The 16⅔% royalty is not high enough" (VC 99).

Unfortunately, the increase in oil prices from $5 to $10 per barrel referred to by Secretary Morton seems insignificant in comparison with more recent trends in domestic crude oil prices. This is shown in Exhibit 1 to this Affidavit. For example:

(1) The average price of domestic crude oil has risen from $7.67 in 1955 to $19.36 in March of this year; and

(2) Newly discovered U.S. crude now sells for about $30 per barrel, which is approximately 2.5 times what was obtainable for new crude in 1975 and about 670 percent greater than pre-embargo prices of $3.89 per barrel.

Similar price increases have occurred in the natural gas industry. To illustrate, as shown in Exhibit 2 of this Affidavit:

(1) Between 1955 and 1972, average gas prices in the U.S. were relatively stable (the compound average annual growth rate over this period was only 3.5 percent);

(2) Average domestic wellhead prices for natural gas increased nearly 600 percent from 18.6 cents in 1972 to $1.20 in December of 1979; and

(3) The average wellhead price paid by interstate pipelines nearly tripled from 47.9 cents in 1976 to $1.42 per thousand cubic feet (Mcf) in February of this year.

The natural gas price data presented in Exhibit 2 are average prices. That is to say, they represent the mean prices of the combination of low-cost, old contracts and much more expensive, new gas contract prices. New gas prices have increased even more dramatically during the 1970's.

For example, in 1971, the Federal Power Commission (now the Federal Energy Regulatory Commission) increased the ceiling price for new contracts covering gas sales from offshore Louisiana OCS leases from 18.5 cents to 26 cents per Mcf. By April of this year, the maximum lawful price permitted under the Natural Gas Policy Act of 1978 for newly discovered gas had risen to $2.43 per Mcf. This represents an increase in the wellhead price for new OCS gas of approximately 835 percent over that 9-year period.

It must also be recognized that the dramatic wellhead price increases summarized in Exhibits 1 and 2 were totally unforeseen by petroleum experts both within the industry itself and in the federal government. For example, when the oil and gas companies submitted their bids on OCS leases during the early 1970's, their cash bonuses were typically developed and evaluated by the Interior Department on the basis of wellhead prices of 26 cents to 45 cents per Mcf for gas and $3.50 to $4.00 per barrel for oil. At that time, no analyst of petroleum and natural gas price trends was able to contemplate, much less believe, that by 1980 new oil would be selling for $30 per barrel or that the federal government would permit new gas prices of approximately $2.40 per Mcf.

Of equal importance, more recent estimates of future oil and gas prices have consistently understated the extent of price increases actually experienced. For example:

(1) As shown in Exhibit 3, the Department of Energy's 1977 forecast of domestic wellhead oil prices in 1985 have already been greatly exceeded for various types of decontrolled crude oil (i.e., newly discovered oil sold in March of this year received $8.16 per barrel more than was estimated in 1977 as the average domestic new oil price in 1985; recent stripper oil prices of $36 per barrel, as opposed to the 1977 estimates of $21.74 for stripper oil in 1985); and

(2) Doe has significantly increased its estimates of 1985, 1990 and 1995 world oil prices in each of the past two years. This is shown in Exhibit 4, which contains a summary of the official DOE world oil price estimates from the 1977, 1978 and 1979 Annual Reports to Congress. As shown there, DOE has more than doubled its estimates of 1985 and 1990 world oil prices during the last two years and increased its 1995 estimate by $15.50—$22 per barrel since last year.

The comparisons of recent DOE oil price forecasts are presented in constant 1979 dollars. That is to say, the effects of future inflation on the price of oil are not taken into account. In its 1978 Annual Report to Congress, DOE also projected future world oil prices in current (i.e., nominal) dollars for the period 1979 through 1995. These projections are summarized below:

Projected World Oil Prices
In Current Dollars/Barrel

Year	Low	Mid Range	High
1979	16.00	16.00	16.00
1985	22.50	22.50	33.00
1990	28.50	35.50	45.50
1995	40.50	58.00	76.00

As was previously shown in Exhibit 1, actual 1979 wellhead prices for decontrolled, domestic crude oil were well above the prices forecasted by DOE only one year earlier. Similarly, the average refiner acquisition cost of crude oil imports last year was $21.67 per barrel, and by March of this year, U.S. refiners were paying $33.42 per barrel for imported crude oil (DOE, Energy Information Administration, *Monthly Energy Review, June 1980*, page 70). Thus, world oil prices in current dollars today have greatly exceeded recent forecasts and they are alread approaching DOE's outdated 1978 projections for 1990.

The fact that the U.S. government has consistenly underestimated oil price increases and has made substantial upward revisions to its future oil price forecasts in each of the last two years is clear evidence that the oil prices used to evaluate cash-bonus bids for federal leases throughout the 1970's were too low, relative to what will ultimately be realized by the oil companies to whom the leases were awarded. This, in turn, means that fair value

was not received by the government for the OCS oil and gas leases issued during this period.

To further illustrate why the cash-bonus, fixed one-sixth royalty bidding system cannot assure the government fair value for OCS resources, consider Exhibit 1 to my Affidavit of June 27, 1979. When that exhibit was prepared last year, I used the then current DOE estimates for world oil prices over the period 1985-1995. These were:

New Crude Oil Prices

	Per Barrel In 1978 Dollars	Per MMBtu In 1978 Dollars	Per MMBtu In Discounted 1978 Dollars
1980	$14.00	$2.33	$2.20
1985	15.09	2.52	2.05
1990	18.83	3.14	2.20
1995	23.83	3.97	2.40

Events in both world and domestic oil markets since last summer have shown that these oil prices are unrealistically low. Indeed, based upon current DOE price data and forecasts, the following oil prices would be appropriate for purposes of estimating the effective government share of total production value from one-sixth royalty OCS leases sold during the period 1975-1978.

Estimated New Crude Oil Prices

	Per Barrel In 1979 Dollars	Per Barrel In 1978 Dollars	Per MMBtu In 1978 Dollars	Per MMBtu In Discounted 1978 Dollars
1980	$28.90	$26.66	$4.44	$4.19
1985	32.00	29.52	4.92	4.00
1990	37.00	34.14	5.69	3.99
1995	41.00	37.83	6.30	3.81
Average	$34.73	$32.04	$5.34	$4.00

Source: DOE, Energy Information Administration, *Analysis Report, Midterm Energy Supply and Demand 1985-1995*, page 4 (June 1980).

The average discounted 1978 dollar price for new oil of $4 per MMBtu for the period 1980-1995 is nearly double that which I used last year ($2.10 per MMBtu) in preparing my June 27, 1979 Affidavit. If it is assumed that one-half the hydrocarbon resources to be produced from the OCS leases sold during the years 1975-1978 are crude oil, then $3.05 per MMBtu ($4.00 + $2.10/2) is the appropriate discounted, constant 1978 dollar price to assign to the 48.7 quadrillion Btu resource estimate shown in Exhibit 1 to my June 27, 1979 Affidavit. As shown in Exhibit 5 to this Affidavit, the modification of my earlier exhibit to reflect more current oil prices and oil price forecasts results in an estimated government share of 21.4 percent for the 1975-1978 cash-bonus, fixed royalty leases, as opposed to the 23. 6 percent estimate contained in my earlier exhibit. Similar downward revisions should be made to each of my previous calculations of the government's effective share of the total production value from OCS leases sold during the 1970's.

I have prepared Exhibit 6 to further illustrate and quantify why a cash-bonus, fixed royalty bidding system cannot possibly assure the government fair value for its OCS resources. The data contained in column (1) of this exhibit are taken from Exhibit 1 of my June 27, 1979 Affidavit. That exhibit showed that the effective government share of future production value from cash-bonus, fixed royalty leases sold during the period 1975-1978 will approximate 23.6 percent. This estimate was calculated on the basis of a constant 1978 dollar price of $2.10 per MMBtu for the oil and gas resources to be produced at that acreage. This estimated price was derived from the then current DOE oil price forecasts through 1995. As shown at Line 12 of this Affidavit, given the bonuses paid and the estimated quantity of oil and gas resources at this acreage, the oil and gas industry would net $78.1 billion, exclusive of royalties and bonuses, at discounted 1978 dollar prices of $2.10 per MMBtu.

Column (2) of this exhibit was prepared in recognition of the more current DOE world oil prices previously discussed. There it is shown that at discounted, 1978 dollar prices of $3.05 per MMBtu, $45.6 million in bonuses would be required if the present value to the oil and gas companies of future production, net of bonuses and royalties, is to remain at $78.1 billion. Thus, this exhibit shows that the dramatic and unexpected increases in world oil prices experienced during the past fifteen months and the new recognized prospects for further price increases in the future will result in a windfall of approximately $38.5 billion for the oil and gas industry. Stated differently:

(1) With world oil prices ranging between $12 and $15 per barrel when this acreage was acquired;

(2) with only moderate increases in world oil prices being anticipated at that time;

(3) with no one anticipating that nominal oil prices would rise to $51 in 1985, $81 in 1990 and $117 in 1995;

(4) the present value of the cash banuses paid was approximately $38.5 billion too low, in view of the significantly higher prices which will ultimately be obtained for all future oil production from these leases.

I have prepared Exhibit 7 to show the approximate magnitude of government revenues foregone if the cash-bonus, fixed royalty bidding system is associated with 70 percent of the undiscovered offshore oil and gas resources to be produced between now and the end of this century and if that bidding system results in reductions below fair value of the effective government share of future OCS oil and gas revenues of 5.0 percent and 10.0 percent, respectively. As shown there, these estimates indicate that the government could forego revenues ranging between:

(1) $6.8 and $32.4 billion if the government's share is 5.0 percent too low;

(2) $13.7 and $64.7 billion if the government's share is 10.0 percent too low; and

(3) $19.6 and $39.2 billion if the mid-points of the USGS resource estimates are used.

As shown in Exhibit 7, the size of the revenues at stake in the choice of bidding systems for OCS acreage is substantial. Indeed, if the mid-range resource estimates are used then the amount by which the government receives less than fair value between 1980 and 2000 could easily exceed the total bonuses paid for all OCS leases sold between 1954 and 1977 of $19.0 billion.

Lastly, in my view, the cash-bonus, fixed royalty bidding system constitutes a substantial barrier to independent entry into OCS oil and gas producing operations. Thus, the cash-bonus, fixed royalty bidding system will stifle competition rather than promote competition as is required by the 1978 amendments to the Act. This is because the large upfront bonus payments required simply to obtain the rights to explore for hydrocarbons on federal leases tend to discourage independent wildcatters from participating in offshore exploration and development. As a result, independent wildcatters have concentrated their efforts in onshore producing provinces and left the OCS primarily to major integrated petroleum companies and the producing affiliates of interstate gas pipelines.

If significantly more active participation in offshore operations by independent wildcatters could be induced, I believe that ultimate oil and gas production from the OCS will be enhanced. This is because a greater number of diverse participants in offshore exploration activities will result in increased exploratory drilling taking place (and perhaps at an increased rate, with respect to time) as

many potential prospects are drilled which otherwise would be ignored by a smaller number of explorers.

Exhibits 1 through 7 attached hereto.

DATED this 14th day of July, 1980

/s/ George L. Donkin
GEORGE L. DONKIN

DISTRICT OF COLUMBIA)
) ss
CITY OF WASHINGTON)

Subscribed, sworn to and acknowledged before me, a Notary Public in and for the State and City aforesaid, by George L. Donkin, on this 14th day of July, 1980

/s/ AMERICA G. WEAR
America G. Wear
Notary Public
State of Virginia
At Large

My Commission Expires
November 15, 1981

Exhibit 1

Domestic Crude Oil Wellhead Prices 1955-1980

Dollars Per Barrel

		Lower Tier	Upper Tier	Stripper	Alaskan North Slope	Naval Petroleum Reserve	Newly Discovered Etc.	Actual Domestic Average
1955	AVERAGE	NA	NA	NA	NA	NA	NA	2.77
1956	AVERAGE	NA	NA	NA	NA	NA	NA	2.79
1957	AVERAGE	NA	NA	NA	NA	NA	NA	3.09
1958	AVERAGE	NA	NA	NA	NA	NA	NA	3.01
1959	AVERAGE	NA	NA	NA	NA	NA	NA	2.90
1960	AVERAGE	NA	NA	NA	NA	NA	NA	2.88
1961	AVERAGE	NA	NA	NA	NA	NA	NA	2.89
1962	AVERAGE	NA	NA	NA	NA	NA	NA	2.90
1963	AVERAGE	NA	NA	NA	NA	NA	NA	2.89
1964	AVERAGE	NA	NA	NA	NA	NA	NA	2.88
1965	AVERAGE	NA	NA	NA	NA	NA	NA	2.86
1966	AVERAGE	NA	NA	NA	NA	NA	NA	2.88
1967	AVERAGE	NA	NA	NA	NA	NA	NA	2.92
1968	AVERAGE	NA	NA	NA	NA	NA	NA	2.94
1969	AVERAGE	NA	NA	NA	NA	NA	NA	3.09
1970	AVERAGE	NA	NA	NA	NA	NA	NA	3.18
1971	AVERAGE	NA	NA	NA	NA	NA	NA	3.39
1972	AVERAGE	NA	NA	NA	NA	NA	NA	3.89
1973	AVERAGE	NA	NA	NA				
1974	AVERAGE	5.03	10.13	NA	NA	NA	NA	6.87

1975	AVERAGE	5.03	12.03	NA	NA	NA	NA	7.67
1976	AVERAGE	5.13	11.71	12.16	NA	NA	NA	8.19
1977	AVERAGE	5.19	10.72	13.59	6.35	13.34	NA	8.57
1978	AVERAGE	5.46	12.15	13.95	5.22	12.85	NA	9.00
1979	January	5.75	12.66	14.55	5.79	13.10	NA	9.46
	February	5.76	12.78	14.88	5.87	13.94	NA	9.69
	March	5.82	12.84	14.88	6.66	13.97	NA	9.83
	April	5.85	12.94	16.71	7.45	14.56	NA	10.33
	May	5.91	13.02	17.53	8.47	15.85	NA	10.71
	June	6.07	13.14	20.24	8.97	16.02	15.23	11.70
	July	6.00	12.79	24.76	13.35	20.13	26.88	13.39
	August	6.09	13.33	25.71	14.14	20.77	20.63	14.00
	September	6.09	13.53	27.09	13.09	20.85	19.55	14.57
	October	6.12	13.56	29.42	13.12	21.01	20.42	15.11
	November	6.09	13.68	30.64	13.48	26.48	22.15	15.52
	December	6.21	13.76	34.99	13.60	29.04	25.40	17.03
	AVERAGE	5.95	13.20	22.93	10.57	19.40	21.66	12.64
1980	January	6.23	13.82	35.92	13.77	28.94	28.28	17.85
	February	6.37	14.03	36.14	13.77	34.96	29.25	18.81
	March	6.35	13.99	36.33	13.77	34.67	30.06	19.36
	AVERAGE	6.32	13.96	36.16	13.77	32.79	29.32	18.68

NA = Not Available

Sources: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review June 1980* and *Annual Report to Congress 1979 Volume Two.*

Exhibit 2

Domestic Natural Gas Wellhead Prices
1955-February 1980

		Cents Per Thousand Cubic Feet	
		Paid By Interstate Pipeline Companies	Total U.S. Average
1955	AVERAGE	NA	10.4
1956	AVERAGE	NA	10.8
1957	AVERAGE	NA	11.3
1958	AVERAGE	NA	11.9
1959	AVERAGE	NA	12.9
1960	AVERAGE	NA	14.0
1961	AVERAGE	NA	15.1
1962	AVERAGE	NA	15.5
1963	AVERAGE	NA	15.8
1964	AVERAGE	NA	15.4
1965	AVERAGE	NA	15.6
1966	AVERAGE	NA	15.7
1967	AVERAGE	NA	16.0
1968	AVERAGE	NA	16.4
1969	AVERAGE	NA	16.7
1970	AVERAGE	NA	17.1
1971	AVERAGE	NA	18.2
1972	AVERAGE	NA	18.6
1973	AVERAGE	NA	21.6
1974	AVERAGE	NA	30.4
1975	AVERAGE	NA	44.5
1976	AVERAGE	47.9	58.0
1977	AVERAGE	69.5	79.0
1978	AVERAGE	83.9	90.5
1979	January	99.9	99.5
	February	102.3	101.8
	March	106.1	106.3
	April	116.7	107.0
	May	118.3	111.6
	June	118.3	112.9
	July	119.2	116.4
	August	125.6	119.0
	September	130.5	120.6
	October	135.6	124.0
	November	141.1	125.6
	December	135.0	128.9
	AVERAGE	121.6	114.9
1980	January	141.3	NA
	February	142.5	NA

N = Not Available

Sources: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review June 1980* and *Annual Report to Congress 1979 Volume Two.*

Exhibit 3

Comparison of 1977 Department of Energy Crude Oil Wellhead Price Estimates for 1985 With Actual Recent Prices

Dollars Per Barrel

	1977 DOE Estimate For 1985	Actual Recent Prices	
		Dec. 1979	March 1980
Third Tier/Newly Discovered	$21.90	$25.40	$34.67
Upper Tier	17.69	13.76	13.99
Lower Tier	7.91	6.21	6.35
Naval Petroleum Reserves	21.90	29.04	32.79
Stripper	21.74	34.99	36.33

Sources: Department of Energy, Energy Information Administration, *Annual Report to Congress, Volume II 1977,* page 139 and *Monthly Energy Review, June 1980.*

Exhibit 4

Comparison of Recent Department of Energy World Oil Price Forecasts for the Period 1985-1995

Prices in 1979 Dollars Per Barrel

Year of Annual Report	1985		1990		1995	
	Mid Range	High	Mid Range	High	Mid Range	High
1977	NA	NA	17.00	27.00	NA	NA
1978	16.00	23.30	20.00	26.00	25.50	34.00
1979	32.00	39.00	37.00	44.00	41.00	56.00

NA = Not available

Sources: U.S. Department of Energy, Energy Information Administration, *Annual Report to Congress,* 1977, 1978 and 1979.

Exhibit 5

Estimated Effective Government Share of Total Production Value From One-Sixth Royalty OCS Leases Sold During the Period 1975-1978 if Productivity Per Acre Equals Average Productivity Per Acre From OCS Leases Sold During the Period 1954-1970

	Acreage	Bonuses In $1000	Present Value of Bonuses in 1000's on 1978 Dollars
1975	1,679,877	$1,088,133	$1,422,256
1976	1,277,936	2,242,898	2,705,568
1977	930,074	1,558,581	1,724,143
1978	932,168	1,234,698	1,234,698
	4,820,055	$6,124,310	$7,086,655

Estimated Oil and Gas Production in Quadrillion Btu per Acre	.0101
Estimated Oil and Gas Production in Quadrillion Btu	48.7
Present Value of Oil and Gas Production in 1000's of 1978 Dollars at Deflated 1978 Price of $3.05 per MMBtu	$148,535,000
Present Value of Royalties @ One Sixth of Production Value	$24,755,833
Present Value of Government Share (Royalties Plus Bonuses)	$31,842,488
Government Share As a Percent of Total Production Value	21.4%

Exhibit 6

Estimated Additional Royalties or Bonuses Required to Maintain the Present Value of Oil and Gas Production, Exclusive of Royalties and Bonuses, for OCS Leases Sold In 1975-1978

Line No.		If Bids are Determined And Evaluated On the Basis of: (1) Oil and Gas Prices of $2.10 Per MMBtu	(2) Oil and Gas Prices of $3.05 Per MMBtu
1.	Acreage	4,820,055	4,820,055
2.	Estimated Oil and Gas Production In Quadrillion Btu per Acre	.0101	.0101
3.	Estimated Oil and Gas Production In Quadrillion Btu	48.7	48.7
4.	Present Value of Oil and Gas Production in 1000's of 1978 Dollars at Deflated 1978 Prices of:		
5.	(a) $2.10 per MMBtu	$102,270,000	—
6.	(b) $3.05 per MMBtu	—	$148,535,000
7.	Present Value of Royalties At one-sixth of Production Value	$ 17,045,000	$ 24,755,833
8.	Net Production Value, Exclusive of Royalties	$ 85,225,000	$123,779,167
9.	Present Value of Bonuses In 1978 Dollars:		
10.	(a) Actual	$ 7,086,655	—
11.	(b) Implicit	—	$ 45,640,822
12.	Present Value of Oil and Gas Production In 1000's of 1978 Dollars, Exclusive of Royalties and Bonuses	$ 78,138,345	$ 78,138,345
13.	Present Value of Royalties and Bonuses	$ 24,131,655	$ 70,396,655
14.	Government Share As a Percent of Total Production Value	23.6%	47.4%
15.	Increase in Bonuses or Royalties Required to Maintain Present Value of Oil and Gas Production, Exclusive of Royalties and Bonuses	-0-	$ 38,554,167

EXHIBIT 7

Estimates of Amount by Which Government's Share of OCS Resource Values Will be Less Than Fair Value If Government's Share is 5 Percent and 10 Percent Too Low

	Low	Mid Point	High
1. Total Offshore Undiscovered Recoverable Resources:			
2. (a) Crude oil in billion barrels	10.0	29.5	49.0
3. (b) Value @ $70 per barrel (in Billions)	$700	$2,065.0	$3,430
4. (c) Natural Gas in trillion cubic feet	42.0	111.5	181.0
5. (d) Value @ $6.60 per Mcf (in Billions)	$277.2	$735.9	$1,194.6
6. Total Value Undiscovered Recoverable Resources (in Billions)	$977.2	$2,800.9	$4,624.6
7. Percent of Total Undiscovered Resources to be Found and Produced Prior to End of Century	20.0	20.0	20.0
8. Total Value of Undiscovered Resources to be Produced Prior to End of Century (in billions)	$195.4	$560.2	$924.9
9. Percent of Line 8. Associated with Cash-bonus, Fixed Royalty Bidding System	70.0	70.0	70.0
10. Total Value of Undiscovered Resources to be Produced Prior to End of Century Associated with Cash-bonus, Fixed Royalty Bidding System (in billions)	$136.8	$392.1	$647.4
11. Amount by Which Government Will Not Receive Fair Value if the Effective Government Shares is Too Low by:			
(a) 5.0 percent, in billions	$6.8	$19.6	$32.4
(b) 10.0 percent, in billions	$13.7	$39.2	$64.7

Sources: (1) For undiscovered recoverable resources: U.S. Geological Survey Circular 725.

(2) For prices in current dollars: Energy Information Administration, *Analysis Report Midterm Energy Supply and Demand 1985-1995*, pages 4 and 6, averages of 1980, 1985, 1990 and 1995 prices.

APPENDIX A

QUALIFICATIONS OF GEORGE L. DONKIN

George L. Donkin is Vice President and Director of Petroleum Studies of J.W. Wilson & Associates, Inc.

Mr. Donkin holds a B.A. in economics from the University of Maryland and a M.A. in economics from that same university. He has been concerned with energy economics since 1970, when he became employed as an industry economist at the Federal Power Commission (now the Federal Energy Regulatory Commission).

From 1970 through September 1972, Mr. Donkin worked in the Area Rate Division of the FPC's Bureau of Natural Gas. This work related to various aspects of natural gas producer regulation, including analyses of gas production costs and the costs of finding and producing new natural gas and crude oil.

In September 1972, Mr. Donkin transferred to the Division of Economic Studies within the FPC's Office of Economics. His principal responsibilities there related to various phases of natural gas industry regulation.

In February 1974, Mr. Donkin became an independent economic consultant under a one-year contract with Cornell University. Much of his work during that year involved an analysis of the market structure of the petroleum and natural gas industries.

In February 1975, Mr. Donkin and others formed J. W. Wilson & Associates, Inc. Since the formation of J.W. Wilson & Associates, Inc., Mr. Donkin has undertaken numerous studies on behalf of federal, state and municipal governments, private enterprise, trade associations and nonprofit organizations on economic issues and problems in the general field of energy resources, transportation and utilization. These research projects have included the supply, transmission and distribution of energy; demand characteristics; cost characteristics; price structures; interfuel competition; and

regulatory policy; with particular emphasis upon petroleum and natural gas. A number of these studies have pertained to regulatory, antitrust and arbitration proceedings, and have been submitted as expert witness testimony in U.S. regulatory and court cases, and Congressional proceedings.

In February 1975, Mr. Donkin was appointed by the Chairman of the FPC to the Technical Advisory Task Force on Prospective Exploration and Development and Additions to Reserves of the National Gas Survey.

Mr. Donkin is a member of the International Association of Energy Economists.

The following is a summary of Mr. Donkin's expert testimony since 1973.

Before the Federal Power Commission and the Federal Energy Regulatory Commission:

In FPC Docket No. CI73-293, et al., testimony on behalf of Staff on the rate of development of offshore Louisiana oil and gas leases sold in the December 15, 1970 Federal lease sale.

In FPC Docket No. CP74-192, testimony on behalf of eight Florida cities on the extent and results of exploratory and developmental drilling activity in onshore and offshore areas of the Texas and Louisiana Gulf Coast producing areas.

In FPC Docket No. RP75-79, testimony on three occasions on behalf of eight Florida cities on economic issues relating to natural gas curtailment policies during periods of supply inadequacy.

In Docket No. RM77-13, testimony on behalf of the American Public Gas Association and the Consumer Advocate of the State of Pennsylvania on factors affecting the cost of finding and producing new natural gas supplies.

In Docket No. OR78-1, testimony on behalf of the Arctic Slope Regional Corporation dealing with competitive issues and the relationship of the undiscovered onshore and offshore crude oil resource base

in North Alaska to tariff levels on the Trans-Alaska Pipeline System.

In Docket Nos. CP78-391, et al., testimony on behalf of the Ohio Consumers' Counsel on the extent to which a national need exists for supplemental coal gas supplies. This testimony dealt with the costs associated with conventional and non-conventional alternatives to gas supplies gasified from coal.

Before the Department of Energy:

Testimony on behalf of the Energy Policy Task Force of the Consumers' Federation of America on the competitive structure of the domestic petroleum industry and the need to monitor and/or regulate the priceof No. 2 home heating oil.

Before the Michigan Public Service Commission:

Testimony on behalf of the Michigan Attorney General on the appropriate level of future annual natural gas sales to be used in establishing retail rates for Michigan Consolidated Gas Company.

Testimony on behalf of the Michigan Attorney General on the automatic purchased gas cost adjustment procedures of the Michigan Consolidated Gas Company.

Before the Ohio Public Utilities Commission:

Testimony on behalf of the Ohio Consumers' Counsel on policy concerning new gas customer additions and new loads for existing gas customers.

Testimony on behalf of the Ohio Consumers' Counsel on gas utility rate design and gas supply issues in the retail rate increase request of the East Ohio Gas Company.

Before the Pennsylvania Public Service Commission:

Testimony on behalf of the Pennsylvania Office of Consumer Advocate on gas supply issues and the

need for synthetic natural gas supplies in the retail rate increase application of National Fuel Gas Distribution Corporation.

Before the Rhode Island Department of Public Carriers and Utilities:

Testimony on behalf of the Department staff on gas utility rate design and gas supply issues in the retail rate increase application of Providence Gas Company.

Before the District of Columbia Public Service Commission:

Testimony on behalf of the D.C. People's Counsel on gas supply and market expansion issues in the retail rate increase application of the Washington Gas Light Company.

Before the United States District Court for the Eastern District of New York:

Testimony in 1976 and 1977 on behalf of the Counties of Nassau and Suffolk on the inadequacies in the U.S. Department of the Interior's assessment of the onshore and offshore resource base and an analysis of the probable benefits and costs associated with crude oil and natural gas production from the Mid-Atlantic Outer Continental Shelf.

Before the United States Congress:

Testimony on matters relating to the structure of the U.S. oil and gas industries and offshore oil and gas producing operations before: Senate Committee on Judiciary, Subcommittee on Antitrust and Monopoly (October 1973); House Committee on Interstate and Foreign Commerce (March 1974); House Ad Hoc Select Committee on Outer Continental Shelf (November 1975); House Committee on Interstate and Foreign Commerce (February 1977); and House Committee on the Interior, Subcommittee on Mines and Mining (February 1977).

RESPONDENTS REPLY MEMO
OF JULY 14, 1980

EXHIBIT 12

DESIGN ELEMENTS OF OCS LEASING EXPERIMENTS MANDATED UNDER S. 521

by

Marshall Rose
Department of the Interior
Office of Policy Analysis

February 1976

Abstract

This paper considers the composition and size of the OCS experiment mandated in S. 521. Four of the nine experimental systems listed in S. 521 have been identified as clearly superior testing candidates. They are:

—Fixed cash bonus with royalty bid

—Fixed cash bonus with profit share bid

—Fixed profit share with cash bonus bid

Fixed profit share, cash bonus bid, and one percent working interest shares.

To efficiently examine a particular hypothesis, 40-60 observations per experimental system are needed. This suggests that for hypotheses relating to leased tracts only, up to 50-80 tracts might have to be *offered* under each of the relevant experimental systems in order to generate 40-60 observations on leased tracts.

The suitable test size of the OCS experimental appears to be between 10 and 25 percent of tracts offered during

the two-year testing period. Under an accelerated leasing schedule, the appropriate test size is probably closer to 10 percent, while a 25 percent test is likely to be more appropriate for low rates of leasing.

I. *Introduction*

Senate bill S. 521 (Section 203) directs the Secretary of the Department of the Interior to experiment with alternative OCS leasing systems over a two-year period. The results of the experiment "shall be incorporated into an overall analysis of these [leasing] systems and this analysis shall be provided to Congress no later than 12 months after the sale date."

The following elements are of primary concern in structuring an experimental design of OCS leasing systems:

1. Objectives of the tests.
2. Systems to be tested.
3. Sample size of individual systems.
4. Sample size of the entire experiment.
5. Statistical design based on specific hypotheses to be tested.
6. Supplementary analysis accompanying empirical tests.

The scope of this paper is limited to the first four of these issues.

II. *Objectives of the OCS Experiment*

Ideally, the experiment should provide information which allows comparison of the alternative leasing systems under consideration with respect to public and private benefits and costs. In this regard the following factors are most important: level of the bids; number of bidders; distribution of bidders by firm size and frequency of

past participation in OCS auction sales; expected Federal revenues; development and production profiles; and ease of program administration.

The level of the individual bids indicates the willingness of firms to pay for the lease as a function of the terms of the auction and the uncertainty in value associated with specific tracts. The number and distribution of bidders indicates the degree of auction competition associated with alternaive leasing systems. Federal revenues and development and production profiles are relevant for determining the expected present value of government receipts as well as the level and timing of output associated with each of the leasing systems considered. The importance of program administration is self evident.

If the information cited above could be generated in sufficient detail, a rigorous comparison of alternative leasing systems could then be conducted. Unfortunately, we can expect that the actual level of information generated will not be nearly sufficient to allow such a comparison.

One reason is that bidders may disguise their bids (or not bid at all) in order to bias the results in favor of the leasing system most favorable to themselves. Owing to differences in bidding strategy, risk aversion, and estimates of reserves, it may not be possible to distinguish spurious bids from truthful ones. Even if this were possible, it would be extremely difficult to infer the production profiles used in generating the bids. This is a particularly vexing problem when the bid variable is a profit share or royalty rate. In the former case, the highest bidding firm may be a relatively inefficient producer, and its bid may reflect a high percentage of a relatively low absolute level of profits. In the latter case, the winning firm may simply bid a speculative royalty rate that would discourage or delay production unless actual reserves are very high. Furthermore, it would take several years to determine the extent to

which a particular leasing system induced such speculative bidding tactics.

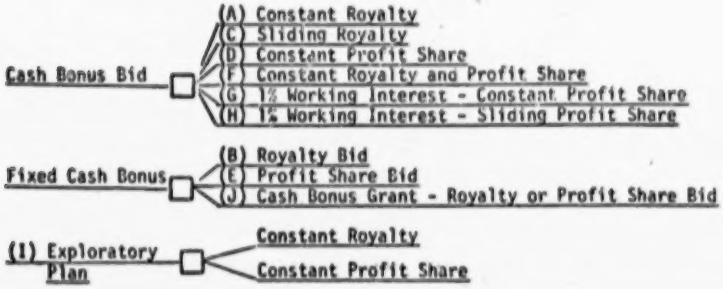
As a result, the information generated by a bidding experiment cannot be used to evaluate alternative systems in a comprehensive and timely manner. Nevertheless, a bidding experiment can be used for more modest purposes, such as testing the predictive reliability of independently developed leasing models; examining a limited number of relevant factors among leasing systems, such as the type and number of bidders, and the ease with which a given system can be administered; and evaluating in detail designated leasing systems with regard to bidding strategies as the given element (royalty or profit share rate) is changed.

III. *Leasing Systems to be Tested*

S. 521 specifies nine basic experimental systems, and labels them (B) through (J). The cash bonus bidding system is denoted by (A). These 10 systems are shown in Figure 1.

Figure 1

OCS Leasing Systems Available Under S. 521



For purposes of the OCS experiment, five of these leasing systems are inferior test vehicles. They are C, H, F, J, and I. Their shortcomings are described below:

(C) Cash bonus bids with sliding scale royalty, and

(H) Cash bonus bids with sliding scale profit share: Based on research to date,[1] it appears that nondevelopment rather than early abandonment is the more serious economic problem associated with royalty and profit shares. Thus, we can expect that modification of constant rates to variable rates will not significantly affect production or bidding strategies. Accordingly, the results obtained from testing systems A (cash bonus bids with constant royalty) and G (cash bonus bids with constant profit share) can be used in conjunction with our analytical models to infer the characteristics of systems having sliding scale rates.

(F) Cash bonus bids with fixed royalty and fixed profit share: With both the royalty and profit share as fixed elements, it is difficult to separate the effect of each element on the cash bonus bid and upon development strategies. The individual effects of each element may be more accurately evaluated by considering two leasing strategies: A (cash bonus bid with constant royalty) and D (cash bonus with constant profit share).

(J) Fixed cash bonus, returned as grants to cover exploration costs, with royalty or profit share bid: We can expect that the cash bonus grants will simply increase the bid variable by an equivalent amount. In this case, leasing system J is largely redundant, since the relevant information can be obtained from systems B

[1] "Analysis of Alternative Bidding Systems for OCS Oil and Gas Leases," Office of OCS Program Coordination, Department of the Interior, April 29, 1975, draft.

(fixed cash bonus with royalty bid) and E (fixed cash bonus with profit share bid).

(I) Exploratory plant: Owing to the ambiguity of the bid variable and the subjective nature of the bid evaluation, it will be difficult to formulate testable hypotheses about this type of leasing system.

Based on the foregoing discussion, we conclude that systems C, H, F, J and I are inferior and/or redundant leasing systems for empirical testing purposes. In fact, we could also argue that these systems are dominated by the others on theoretical grounds as well, but it is not necessary (perhaps not desirable as well) to do so at this time.

IV. *Sample Size Per Experimental System*

Statistical tests of significance involve, among other things, determination of whether a difference in sample statistics, e.g., mean values, is sufficiently large to infer that the samples are drawn from different populations, for example, populations having unequal mean values. As the sample size increases, the test becomes more sensitive, in the sense that smaller measured differences in the sample means can be considered statistically significant.

In testing a particular hypotheses at a specified level of confidence, the magnitude of the difference in statistics that is significant depends upon the sample size and the estimated standard deviation of the appropriate variable under consideration. For example, suppose that we want to test whether or not there is a significant difference in the mean number of bids per tract received for two leasing systems, namely cash bonus bidding, b, and royalty bidding, r.

Denote the sample mean number of bonus bids by Xb, and the sample mean number of royalty bids by Xr.

The symbol σ represents the estimated standard deviation of the variable Xr — Xb.

The significance ratio is defined by

$$T = \frac{Xr - Xb}{\sigma} \qquad (1)$$

When the samples are independent,

$$\sigma^2 = \sigma r^2 + \sigma b^2, \qquad (2)$$

and

$$\sigma r^2 = Sr^2/(Nr - 1.0),$$

where Sr^2 is the variance of the sample number of royalty bids, and Nr is the size of the royalty sample. Th term σb^2 is defined in a similar way.

To determine if Xr — Xb is significant, we compare the value of T to the number of standard deviates taken from the Students t distribution for Nr + Nb — 2 degrees of freedom. If T exceeds this number of standard deviates at a given level of confidence, we can infer that the difference in sample mean values is statistically significant.

If we let t represent the number of standard deviates, then $t\sigma$ is the minimium difference in sample mean values that can be considered significant. As the sample size increases, both t and σ decline, so that smaller differences in mean values become significant.

At the same time, larger sample sizes are more expensive. In the absence of cost-benefit measures, there is no exact method for finding the optimal sample size. Accordingly, we proceed in the following heuristic fashion.

The standard assumption is made that if Si (i = r, b) is known for any Ni, then this Si is our best estimate of the sample standard deviation for any Ni[2]. Also, over

[2] See, for example, Snedecor, G., *Statistical Methods*, Iowa State University Press, Ames, Iowa, 1956, pp. 60-61.

the range of sample sizes in which we will be interested, t can be taken as fixed. Thus, as the sample size increases, the improved sensitivity of the experiment can be measured solely by changes in σ.

Given sample values for the Si and Ni, we can compute the proportional change in σ as the Ni are varied. In this way we can find a range for Ni within which the appropriate sample size is likely to reside. We demonstrate this approach with the following example.

In OCS Sale #36, 297 tracts were offered: 10 under royalty bidding, and 287 under bonus bidding. The following statistics were found for the number of bids per tract.

$$Xr = 5.3, \qquad Sr = 4.80$$

$$Xb = 1.1, \qquad Sb = 1.56$$

Computing the significance ratio from equation (1), we find that $T = 2.63$. At the 95% level of confidence, $t = 1.96$ for 295 degrees of freedom. Since $T > t$, the difference in mean values is considered significant.

Calculating σ in equation (2), we then find that $t\sigma = 3.14$, which is the minimum difference in sample mean values that can be detected by this test as being significant. The effect of alternative test sizes on the level of significance is shown in Table 1.

Three separate cases are considered therein. In the first case, we let $Nr + Nb = 297$. The second case has $Nr + Nb = 80$. The third case assumes that $Nb = 70$. These sample sizes span the range of expected values of future sale sizes.

For each of these three cases, the proportional effect on $t\sigma$ as the sample size changes is approximatel by σ_0. This term represents the normalized value of σ, where $\sigma_0 = 1.0$ for $Nr = 10$ in each case. The results are seen to be quite similar for all three cases. An increase in

Table 1

Effect of Sample Size on the Level of Significance

Sr = 4.80
Sb = 1.56

Nr	Nb	σ	σ_0
10	287	1.60	1.00
20	297	1.10	0.69
30	267	0.89	0.56
40	257	0.77	0.48
50	247	0.68	0.43
60	237	0.63	0.39
75	222	0.56	0.35
100	197	0.49	0.31
200	97	0.38	0.23
10	70	1.61	1.00
20	60	1.12	0.70
30	50	0.92	0.57
40	40	0.81	0.50
50	30	0.74	0.46
60	20	0.72	0.45
70	10	0.78	0.48
10	70	1.61	1.00
20	70	1.12	0.70
30	70	0.91	0.57
40	70	0.79	0.49
50	70	0.71	0.44
60	70	0.65	0.40
75	70	0.49	0.30
100	70	0.42	0.26
200	70	0.39	0.24

Nr from 10 to 20 reduces σ_0 by 30 percent. An increase in Nr from 20 to 30 reduces σ_0 by 20 percent. An increase in Nr from 30 to 40 reduces σ_0 by approximately 15 percent. When Nr increases from 40 to 50, σ_0 is reduced by about 10 percent. Additional increases in Nr result in proportionately smaller reductions in σ_0.

These results suggest that, for the particular hypothesis being tested, $40 \leq Nr \leq 60$ is an appropriate test size. However, the results are significantly more general than one might suspect.

It is easy to show that σ_0 is unaffected by scalar changes in the Si. Therefore, σ_0 is the same for a given value of Sr/Sb. In the sample problem, the values of σ_0 in Table 1 are unchanged as long as $Sr/Sb = 3.08$. Experimentation with different values of Sr/Sb shows that, for Nb constant and lying within the range of 50-300, the largest reduction in σ_0 for given changes in Nr occur at $Sr/Sb \cong 3.0$. Using the reduction in σ_0 with respect to changes in Nr as a proxy for marginal benefits, it follows that at any level of Nr, marginal benefits will be lower when $Sr/Sb \cong 3.0$. Thus, if the magnitude of Sr/Sb is substantially different from 3.0, we will find that the appropriate range of sample sizes for the experimental systems will lie below $40 \leq Nr \leq 60$.

In any forthcoming OCS experiment, it may be desirable to test two bidding systems on the same set of tracts. In this way differences in tract parameters could be taken into account or differences in the bidding results could be analyzed with more precision. When the sample results are paired in this manner, it is likely that the results will not be independent.

The formula for computing σ for paired samples is

$$\sigma^2 = \sigma r^2 + \sigma b^2 - 2R\sigma r\,\sigma b,$$

where R is the correlation between the two samples. Because Nr=Nb in these cases, it can be shown that

$$\sigma_0 = 3.0/\sqrt{Nr - 1.0}\ .\ \text{3/}$$

That is, σ_0 is not dependent upon either the absolute or relative levels of the Si, nor is it dependent upon R. The numerical relationship between σ_0 and the sample size is presented in Table 2.

3/ The numerator is equal to $\sqrt{Nr-1.0} = 3.0$ for Nr = 10. As the sample size increases, σ is equal to a constant, which depends upon Sr, Sb, and R, multiplied by $1.0/\sqrt{Nr - 1.0}$.

Table 2

The Effect of Sample Size on the Level of Significance: Paired Samples

Nr=Nb	10	20	30	40	50	60	75	100	200
σ_0	1.00	0.71	0.58	0.50	0.45	0.41	0.37	0.32	0.22

Comparison between Tables 1 and 2 does not reveal any substantial differences in the effect of sample size on the level of significance for paired and unpaired samples. However, as a practical matter, it appears desirable to design an experiment in which Nr is somewhat larger when the samples are paired. The reason is that, in these cases, we can expect some firms to submit bids on only one of the two leasing systems for the paired-sample tracts. In this way they can still win the tract if the system under which they bid on is chosen for evaluating bids. However, in unpaired samples, the firm obviously cannot win a tract if it refuses to bid under an experimental system, if this is the only bidding system utilized on that tract.

In summary, this section has shown that, in order to generate satistically valid results in an efficient manner, no more than 40-60 observations are needed per experimental system. Assuming that 75 percent of tracts offered receive serious bids, we conclude that the *maximum* number of tracts that should be offered under any one experimental leasing system is between 50 and 80.

V. *Overall Size of the Experiment*

This section considers the following question: during the period of the OCS leasing experiment, what percent of available tracts should be offered under experimental systems? To answer this question, a decision theoretic model has been developed. The model is explained in detail in the Appendix.

The primary elements of the model are depicted in Figure 2, where square nodes represent decision points and circles represent chance events. The decision problem is to choose between the options of not testing, NT, or testing at sixe X, denoted by TX. This decision depends upon the worth of not testing, Wn, compared to the worth of testing at sixe X, denoted by Wx. By worth we mean the net social value of tracts leased according to the relevant decision rules associated with testing and not testing during the k-year planning period of future OCS sales.

The model assumes that if we do not test any experimental leasing systems, then the cash bonus bidding system will be chosen. This choice is denoted by Ab.

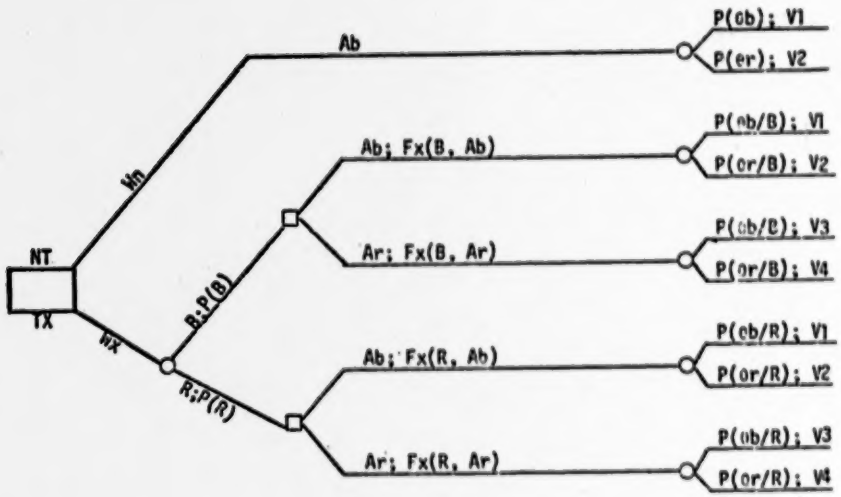
If testing is undertaken, then 100X percent of tracts offered during the h-year test period will be leased under experimental systems. The test will signal that either cash bonus bidding (B) or one of the experimental systems (R) is the better leasing system. "Better" means here that the particular leasing system so described generates a higher aggregate social value for all tracts offered during the planning period, compared to its counterpart systems.

Given a particular test signal, B or R at the end of the test period, a choice is then made to lease tracts using cash bonus bidding or using one of the experimental systems. The latter choice is denoted by Ar. The choice of Ab or Ar for test signal B or R depends upon the expectation function Fx. The calculation of Fx is described in the Appendix.

Suffice it to say here that Fx depends upon (1) the prior probabilities P (θb) and P(θr), representing the chances that bonus or one of the experimental systems is the true state, i.e., the best method of leasing; (2) the information matrix P′, which indicates the choices that the test will correctly predict which system is best, for each of

Figure 2

Decision Analysis Testing Problem



V1 = V1 (Ab,øb)
V2 = V2 (Ab,ør)
V3 = V3 (Ar,øb)
V4 = V4 (Ar,ør)

the two states, θb and θr; (3) the payoff matrix V', which represents the relative values associated with making correct and incorrect decisions for a given state; and (4) the probabilities P(B) and P(R) which represent the chances of obtaining test signals B or R.

For any set of parameters, Wn and Wx are computed over the potential range of V'. The range of V' in which Wx > Wn is then determined. Finally, the probability that V' will fall within the range that results in Wx > Wn is found. This probability is denoted by $P(Wx > Wn) = \beta$.

The numerical results for β are shown in Tables 3, 4 and 5. The following parameters are stipulated:

—The discount rate, i, is 10 percent.

—The test period h, is two years.

—The planning period k, is ten years.

—There is an 80 percent chance that the test results will correctly predict the true state, i.e., $P(B/\theta b) = P(R/\theta r) = 0.8$.

Recall that $P(\theta b)$ is the prior probability that cash bonus bidding is a "better" leasing system than any of the experimental systems. The symbol Z represents the ratio of the number of tracts leased during the 2-year test period to the number of tracts leased during the 10-year planning period. The results shown in the Tables are independent of the absolute number of tracts leased in periods h and k.

A 50 percent test size is considered first, in Table 3. For $P(\theta b) > 0.5$, it is unlikely that testing at this level will be more valuable than not testing, for virtually any feasible value of Z. Only in the presence of ignorance, defined as $P(\theta b) = 0.5$, does it appear marginally worthwhile to prefer a 50 percent test to not testing. Because we have been intentionally optimistic with regard to the

accuracy of testing, it is prudent to reject a 50 percent test size.

Consider next a 25 percent test. Table 4 shows that, unless $P(\theta b) < 0.55$, a 25 percent test cannot be justified. (The most likely value of Z is 0.3). Accordingly, it appears from these findings that the OCS experiment should be smaller than 25 percent.

Table 5 considers a 12.5 percent test size. In this case we find that testing is likely to be worth more than not testing if $P(\theta b) \leqslant 0.6$. A test of this size does not appear inefficient.

Interpretation of these results with regard to the optimal sample size remains, to a large extent, a matter of judgment. Based on the decision analysis, it appears that the optimal sample size is more than 10 percent, but less than 25 percent.

In general, the appropriate percentage test size is inversely related to Z. This is the case because as the (relative) number of tracts leased during the test period declines, the number of tracts remaining to be leased after this period increases. As a result, the value of testing tends to increase when Z decreases, since the optimal decision rules that derive from testing can then be applied to a greater number of remaining tracts. These observations suggest that as $Z \rightarrow 0.4$, the suitable test size is closer to 10 percent, while for the case of $Z \rightarrow 0.2$, the appropriate test size is approximately 25 percent.

Table 3

Probability that a 50 Percent Test is More Valuable Than Not Testing */

	$\beta = P(Wx > Wn)$				
Z	$P(\theta b) = 0.5$	$P(\theta b) = 0.6$	$P(\theta b) = 0.7$	$P(\theta b) = 0.8$	$P(\theta b) =$
0.2	0.60	0.40	0.06	- 0 -	- 0 -
0.3	0.52	0.28	- 0 -	- 0 -	- 0 -
0.4	0.45	0.17	- 0 -	- 0 -	- 0 -
Average	0.52	0.28	0.02	- 0 -	- 0 -

Table 4

Probability that a 25 Percent Test is More Valuable Than Not Testing

	$\beta = P(Wx > Wn)$				
Z	$P(\theta b) = 0.5$	$P(\theta b) = 0.6$	$P(\theta b) = 0.7$	$P(\theta b) = 0.8$	$P(\theta b) = 0.$
0.2	0.66	0.50	0.22	- 0 -	- 0 -
0.3	0.61	0.42	0.10	- 0 -	- 0 -
0.4	0.56	0.34	- 0 -	- 0 -	- 0 -
Average	0.61	0.42	0.11	- 0 -	- 0 -

*/ Recall that the accuracy of any test size (defined by matrix P' in the Appendix) is assumed equal to 80 percent in Tables 3, 4 and 5. If we allow the test accuracy to decline below 80 percent for smaller test sizes, then in these cases β will also decline and the results become more favorable to not testing. This suggests that if testing is, in fact, undertaken, a modest test size is appropriate.

Table 5

Probability that a 12.5 Percent Test is More Valuable
Than Not Testing

	$\beta = P(Wx > Wn)$				
Z	$P(\theta b) = 0.5$	$P(\theta b) = 0.6$	$P(\theta b) = 0.7$	$P(\theta b) = 0.8$	$P(\theta b) = 0.9$
0.2	0.70	0.56	0.31	- 0 -	- 0 -
0.3	0.67	0.52	0.24	- 0 -	- 0 -
0.4	0.64	0.46	0.17	- 0 -	- 0 -
Average	0.67	0.51	0.24	- 0 -	- 0 -

Appendix: Decision Theoretic Model

The decision analysis model considers two states of nature. The first, denoted by θb, represents the state wherein cash bonus bidding, with royalty or profit share fixed at any predetermined level, is the "better" leasing system. "Better" is used here to suggest that tracts leased under cash bonus bidding generate a higher net social value than tracts leased under any one of the experimental systems. Similarly, θr denotes the state wherein one of the experimental systems generates a higher net social value than the cash bonus bidding system. The prior probabilities $P(\theta b)$ and $P(\theta r)$ represent the likelihood that either θb or θr is the true state. Accordingly, $P(\theta r) = 1 - P(\theta b)$.

The symbol B represents experimental test results predicting that θb is the true state, while the symbol R denotes test results suggesting that θr is the true state. The information matrix given by P' below

Test Result \ State	θb	θr
B	$P(B/\theta b)$	$P(R/\theta b)$
R	$P(B/\theta r)$	$P(R/\theta r)$

$= P'$

denotes the likelihood of obtaining the designated test signals conditional upon specified states of nature. For example, $P(B/\theta b)$ is the probability that testing will (correctly) predict that θb is the true state, given that it is, in fact the true state.

The decision to choose cash bonus bidding is denoted by Ab. The decision to choose one of the experimental systems is denoted by Ar. The payoff matrix can be represented by V' below.

Action \ State	θb	θr
Ab	$V1(Ab,\theta b)$	$V2(Ab,\theta r)$
Ar	$V3(Ar,\theta b)$	$V4(Ar,\theta r)$

$= V'$

For example, $V1 = V1(Ab,\theta b)$ denotes the payoff that derives when the cash bonus bidding system is used on a tract, given that cash bonus bidding is, in fact, a better leasing system than any one of the experimental leasing systems.

Suppose that the ratio of tracts leased to tracts offered is the same for any of the leasing systems under consideration. Then V can be interpreted as representing the net social value per leased tract associated with a designated action, given a specified state.

The ratio of the number of tracts leased (offered) under experimental systems to the total number of tracts leased (offered) during the test period is denoted by X. The symbol Z represents the ratio of the number of all tracts leased during the test period to the total number of tracts leased during the planning period. It follows that XZ is the ratio of the number of tracts leased under experimental systems during the test period to the total number of all tracts leased during the planning period. If M tracts will be leased during the planning period, then MXZ is the number of tracts in the OCS experiment.

At this point it is possible to develop expressions for the worth associated with not testing, given by Wn, and the worth associated with a test of a specified size X, given by Wx. Consider first the expression for Wn.

The following terms are defined:

h = number of years in the testing period.

k = number of years in the planning period.

i = discount rate.

Without testing, the cash bonus bidding system is assumed to be employed throughout the planning period. The expected worth of a tract leased with this system at time t = 0 is given by

$$E = P(\theta b)\, V1 + P(\theta r) V2.$$

The discount factors are defined by

$$D^1 = \sum_{t=0}^{h-1} (1 + i)^{-t}$$

$$D^2 = \sum_{t=h}^{k-1} (1 + i)^{-t}$$

Suppose that tracts are leased uniformly during both period h and during period k - h. There will then be MZ/h tracts leased per year for h years, and M(1 - Z)/(k - h) tracts leased per year for k - h years. Therefore, we can write

$$Wn = E\left\{\frac{MZ}{h} D^1 + \frac{M(1 - Z)}{k - h} D^2\right\} \qquad (4)$$

Now consider Wx. The marginal and posterior probabilities are computed from Bayes' Theorem:

$$P(B) = P(B/\theta b)\, P(\theta b) + P(B/\theta r)\, P(\theta r)$$

$$P(R) = 1 - P(B)$$

$$P(\theta b/B) = P(B/\theta b)\, P(\theta b)/P(B)$$

$$P(\theta r/B) = 1 - P(\theta b/B)$$

$$P(\theta b/R) = P(R/\theta b)\, P(\theta b)/P(R)$$

$$P(\theta r/R) = 1 - P(\theta b/R)$$

Denote the expectation associated with decisions given test signals by Fx. Let

$$H1 = \frac{MZ(1 - X)}{h} D^1 + \frac{M(1 - Z)}{k - h} D^2$$

$$H2 = \frac{MZX}{h} D^1$$

$$H3 = \frac{MZX}{h} D^1 + \frac{M(1 - Z)}{k - h} D^2$$

$$H4 = \frac{MZ(1 - X)}{h} D^1$$

The expectation functions, Fx, can now be expressed by

$$Fx(B, Ab) = P(\theta b/B)\{V1(H1) + V3(H2)\} + P(\theta r/B)\{V3(H1) + V4(H2)\}$$

$$Fx(B, Ar) = P(\theta b/B)\{V3(H3) + V1(H4)\} + P(\theta r/B)\{V4(H3) + V2(H4)\}$$

$$Fx(R,Ab) = P(\theta b/R)\{V1(H1) + V3(H2)\} + P(\theta r/R)\{V2(H1) + V3(H2)\}$$

$$Fx(R,Ar) = P(\theta b/R)\{V3(H3) + V1(H4)\} + P(\theta r/R)\{V4(H3) + V2(H4)\}$$

From these expressions we can write

$$Wx = P(B)\{\max [Fx(B,Ab), Fx(B,Ar)]\} + P(R)\{\max [Fx(R,Ab), Fx(R,Ar)]\} \quad (5)$$

Ordinarily, it would be sufficient to compute Wn and the Wx, and then to choose the test size at which the worth is at a maximum. However, we do not know the magnitude of the elements in the payoff matrix V. 4/

The approach taken is to choose, on the basis of observed and inferred behavior, a V which ranges over the likely values of the (normalized) payoffs. For example, because it is clear that making a correct decision for a given state of nature is better than making an incorrect decision, it follows that

$$V1 > V2, \quad (6)$$

$$V4 > V3. \quad (7)$$

Further, the cash bonus bidding system has been used for many years, rather than any one of the experimental systems. Assuming that, with our current state of knowledge, the same decision, Ab, would continue to be made in the future, it follows that we can infer the relationship given by

$$P(\theta b)\, V1 + P(\theta r)V2 > P(\theta b)\, V3 + P(\theta r)\, V4 \quad (8)$$

Although we believe that $P(\theta b) > 0.5$, we also believe that, based on our current level of knowledge, the cash bonus bidding system would continue to be used even if $P(\theta b)$ were as low as 0.5. 5/ Stated equivalently, we find that when $P(\theta b) = 0.5$, expression (8) becomes

$$V4 - V2 < V1 - V3 \quad (9)$$

4/ We do not have much information about P either. Nevertheless, the numerical results are seen to favor modest test sizes at a level of P which is intentionally favorable to testing in general.

5/ To the extent that $P(\theta b) < 0.5$, and Ab would be chosen, the numerical results generated become more favorable to smaller test sizes. Of course, if we thought that Ab would be chosen only if $P(\theta b) > 0.5$, the argument tends to favor larger test sizes.

A payoff matrix that satisfies (6), (7), and (9) is represented by

$$V' = \begin{bmatrix} 1.0 & 0 \\ 0 & V4 \end{bmatrix} \qquad (10)$$

where $0 < V4 < 1.0$.[6/] This range of V4, as well as inequality (9), appear reasonable when it is recalled that there are up to nine experimental systems to consider. Even if θr is the true state, and decision Ar is made, we still may not choose the "best" one of the experimental systems. That is, as the number of experimental systems increases, the posterior probabilities associated with any one of the experimental systems, $P(\theta r/R)$, decline, so that the expected payoffs from choosing Ar also decline. Thus, if V4 (in normalized form) is considered an expected value over all experimental systems, the relationship given by (9) appears justified.

At first glance it might seem that the choice of the unit matrix for V' above is somewhat arbitrary. Some reflection, however, indicates that this is not the case. Any V' which satisfies the constraints in (6), (7) and (9) is equivalent for our purposes to the unit matrix given in (10). Any one of these alternative matrixes can be converted into (10) by adding (subtracting) a constant to any column, and/or by multiplying (dividing) the entire matrix by a scalar. Such operations do not affect the ranking of column elements or the ratio of column differences, so that all constraints are preserved.

In addition, our objective is to find the level of V4 at which Wx = Wn. This break-even level, expressed as a fraction of the feasible range of V4, is unaffected by changes in V' of the sort just described.

To prove this, we first set Wx = Wn, using equations (4) and (5). The solution is of the form

$$\frac{V1 - V3}{V4 - V2} = \phi \qquad (11)$$

where ϕ is a constant that depends upon the problem parameters. Let the solution of (11) be given by $V4 = \bar{V4}$. Define the relative break-even level of V4 by

$$\beta = \frac{\max V4 - \bar{V4}}{\max V4 - \min V4} \qquad (12)$$

6/ The author is indebted to Bart McGuire of the Interior Department for suggesting this simplified form for V'. Professor McGuire also provided a computer program for generating the numerical results presented in Tables 3, 4 and 5.

Let V'be given by (10). It can be demonstrated that for any modification in this V'by a scalar and/or by adding constants to columns, the solution of (12) is always

$$\beta = \psi - 1/\psi \ ,$$

and the proof is completed.

Assuming that V4 in uniformly distributed over its feasible range, it follows that β can be interpreted as the probability that Wx exceeds Wn, i.e.,

$$\beta = P(Wx > Wn).$$

On the basis of the magnitude of this measure for different test sizes and problem inputs, we can infer the appropriate size of the OCS leasing experiment. Numerical results are presented in Tables 3, 4 and 5.

RESPONDENTS REPLY MEMO OF JULY 14, 1980

EXHIBIT 13

[SEAL]

UNITED STATES DEPARTMENT
OF THE INTERIOR

OFFICE OF THE SECRETARY
Washington, D.C. 20240

April 17, 1978

Memorandum

To: Deputy Assistant Secretary—Policy, Budget and Administration

From: Marshall Rose /s/ MR

Subject: Preliminary Analysis of OCS Sale #43

This memorandum analyzes two aspects of Sale #43: the competitive nature of the sale, and the bidding behavior on fixed royalty versus sliding-scale tracts. The results indicate that although two companies, Exxon and Tenneco, were high bidders on 61% of the tracts, they did no better than the other bidders in terms of the bonuses paid per unit of producible reserves as estimated by GS or per dollar of GS estimated tract value. Analysis of bidding behavior does not reveal any significant differences in the number of bids or the relative amounts bid between fixed royalty or sliding-scale tracts.

Competition in the Sale

Only 11 different companies chose to participate in Sale #43. This was probably due mainly to two factors: unfavorable reserve prospects and unfamiliarity with the sliding-scale lease terms.

The relative performance of the two companies having the highest bids on the largest number of tracts in the

sale is presented in Table 1. Both Exxon and Tenneco are seen to have paid modestly less than the other bidders per unit of reserves that are expected to be produced on their high-bid tracts. Exxon's high bids were more than twice the GS valuation, while Tenneco's high bids exceeded the GS estimates by almost 50%. The remaining high bids were approximately 70% greater than the GS values.

Although Exxon's high bids (if accepted) will capture 28% of the expected reserves, it paid 28.5% of the sale's high bids. Similarly, Tenneco's high bids were on tracts containing 27.6% of the expected reserves, while its bonus bids represented 25.4% of the high bids.

Table 1. *Measures of Company Performance*

	Exxon	Tenneco	Others	All Companies
Amount paid for each dollar of GS value	$2.07	$1.48	$1.72	$1.73
Percent of total expected reserves	28.0%	27.6%	44.4%	100%
Percent of total high bids	28.5%	25.4%	46.1%	100%
Percent of expected reserves on sliding scale tracts	33.1%	24.6%	42.3%	100%
Percent of high bids on sliding scale tract	41.0%	33.8%	25.2%	100%
Percent of expected reserves on fixed royalty tracts	0.0%	44.4%	55.6%	100%
Percent of high bids fixed royalty tracts	0.5%	6.8%	92.7%	100%

Exxon and Tenneco had high bids on more than 70% of the sliding-scale tracts, representing almost 58% of the expected reserves on this class of tracts. However, these companies paid approximately 75% of the total bonuses on these tracts.

On the fixed royalty tracts, Exxon won only one low value tract. Tenneco did considerably better, winning five tracts having 44.4% of the expected reserves and paying only 6.8% of the high bids for all fixed royalty tracts. Nevertheless, the expected reserves captured by Tenneco on these tracts represented less than 7% of the total expected reserves on all tracts that received bids under both leasing systems.

In sum, the two companies that were most successful in terms of tracts won were not particularly adept at getting the most value per dollar expended. In this regard, Exxon's performance was somewhat worse than the remaining nine bidding firms, while Tenneco's results were slightly better. Accordingly, based on the measures of performance noted in Table 1, the sale does not appear to have been anti-competitive.

Fixed Royalty versus Sliding-Scale Tracts

One of the claimed advantages of the sliding-scale system is that it tends to promote competitive bidding on the part of the smaller firms in OCS lease sales. However, smaller company participation in Sale #43 was minimal, and only two companies submitted bids on (four different) sliding-scale tracts while not submitting any bids on the fixed royalty tracts. These results occurred despite the fact that of those tracts receiving bids, (1) the average sliding-scale tract value as estimated by GS was twice as high compared to the fixed royalty tracts, (2) three times as many sliding-scale tracts had a GS value in excess of one million dollars compared to the fixed royalty tracts, and (3) five times as many sliding-scale tracts had both a GS value and high bid in excess of one million dollars compared to the fixed royalty tracts.

In light of these observations, it is reasonable to conclude that on tracts receiving bids, the modestly higher

number of average bids on sliding-scale tracts (1.925) compared to fixed royalty tracts (1.294) resulted from the sliding-scale tracts having more favorable prospects, and participating firms "submitting" more zero bids on fixed royalty tracts.

The sum of the winning bids on sliding-scale tracts was 43% higher than the GS value. For fixed royalty tracts, the sum of the winning bids was 225% higher. To determine whether the different outcomes under the two leasing systems could be attributed to factors other than pure chance, a statistical analysis was conducted to test the hypothesis that there was no difference in the ratio of high bids to the GS valuation between the leasing systems. It was determined that, even under statistical assumptions that favored rejection, the null hypothesis could not be rejected. Hence, the noted differences in bidding behavior cannot be attributed to non-random bidding factors.

cc: Don Bieniewicz
Robert Davis
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Tom Readinger
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Bill James
Holly Tomlinson

[SEAL]

UNITED STATES DEPARTMENT
OF THE INTERIOR

OFFICE OF THE SECRETARY
Washington, D.C. 20240

May 9, 1978

Memorandum

To: Heather Ross

From: Marshall Rose /s/ MR

Subject: Some Statistical Results of OCS Sale #45

This memorandum discusses the results of Sale #45 for the two leasing systems used and for the competing bidders. To simplify the exposition, the sliding scale tracts are referred to as S tracts; the fixed (one sixth) royalty tracts are called F tracts.

In this sale, 16 tracts were offered under the sliding scale leasing system; 10 of these tracts received at least one bid. In addition, 129 tracts were put up for bidding under the fixed royalty system; 91 of these tracts received one or more bids.

The average number of bids received was 3.80 for the 10 S tracts and 2.69 on the 91 F tracts. Although the S tracts averaged about one more bid per tract compared to the F tracts, there is convincing evidence that this difference is not due to the alternative leasing systems used:

1. One S tract received 16 bids. When this tract is eliminated from the calculations, we find that the average number of bids per tract is somewhat higher on F than on S tracts.
2. Both S and F tracts have the same median number of bids—two.

3. Eighty five companies submitted single or joint bids in Sale #45. Only 46 different companies bid on the S tracts, while 84 different firms bid on F tracts. Thus, there were 39 companies bidding exclusively on F tracts, but only one firm bidding solely on S tracts.

To supplement these findings, a statistical test of the null hypothesis was conducted. This test strongly indicated that there was no significant difference in the number of bids received per tract between the two leasing systems. Accordingly, these observations tend to confirm those results obtained from OCS Sale #43, in which no noticeable increase was evident in either the number of bidders or in the number or bids owing to use of the sliding scale royalty system.

Measures of bidding success for the major and minor firms in the sale between the two leasing systems are shown in Table 1.* The majors submitted 89 percent of the high bids on S tracts, but only 67 percent on F tracts. These high bids represented 76 percent of the RMROV's on S tracts, compared to just 17 percent on F tracts. While the majors captured 73 percent of the expected quantity of producible reserves on S tracts, they won (subject to their high bids being accepted) only 39 percent of the reserves on F tracts.

Although the majors submitted 65 percent of the high bids, the tracts upon which these bids were placed repre-

* Ranked in order of annual U.S. refined product sales, the eight majors are Exxon, Texaco, Chevron (a.k.a. Standard Oil of California), Amoco (a.k.a Standard Oil of Indiana), Shell, Mobil, Gulf, and ARCO. A clever mnemonic suggested by Don Bieniewicz is the acronym MEGA-CATS.

cc: Les Silverman
Robert K. Davis
Al Powers
Ted Heintz
Maribeth Handsman
Carolita Kallaur
Don Bieniewicz
Tom Readinger
Sam Bae
Holly Tomlinson
Bill James

sented just 21 percent of the RMROV's and 41 percent of the expected quantity of producible reserves in the sale. This relatively poor level of bidding proficiency is also seen in some other measures of performance shown in Table 2. For example, in terms of the high bid per dollar of GS estimated value, the eight major firms paid $10.17 on S tracts and $19.65 on F tracts. On the other hand, the remaining "minor" firms paid only $4.01 on S tracts and just $2.03 on S tracts. Moreover, in terms of the high bid per expected barrel of producible reserves, both major and minor firms paid almost 40 percent less on F tracts than on S tracts; however, the majors paid more than three times as much in absolute magnitude on a per barrel basis.

Looking at individual performers, Tables 1 and 2 list, in order, the four firms that submitted the highest amounts of "winning" bids. Exxon, for example, submitted high bids totaling $143.8 million, and captured 11 of 14 which it bid on. These 11 tracts were estimated by GS to be worth only $18.2 million. Thus, Exxon paid $7.90 per dollar of GS estimated value, which is somewhat higher than the average figure for the sale of $5.26.

Table 1. Measures of Bidding Performance

	S Tracts			F Tracts			All Ttracts		
Firms	High Bids	RMROV	Reserves	High Bids	RMROV	Reserves	High Bids	RMROV	Reserves
Majors	89%	76%	73%	67%	17%	39%	65%	21%	41%
Minors	11	24	27	33	83	61	35	79	59
All Firms	100	100	100	100	100	100	100	100	100
Exxon	76	48	47	12	10	26	19	12	27
Mobil	—	—	—	10	3	5	9	3	5
Getty	—	—	—	9	16	9	8	15	8
ARCO	12	24	19	6	2	5	7	3	6

Table 2. Measures of Bidding Proficiency

Firm	High Bid per Dollar of RMROV			High Bid per Barrel of Reserves		
	S Tracts	F Tracts	All Tracts	S Tracts	F Tracts	All Tracts
Majors	$10.17	$19.65	$17.46	$14.71	$9.14	$9.63
Minors	4.01	2.03	2.07	4.81	2.94	2.98
All Firms	8.71	3.13	5.26	12.00	5.36	5.69
Exxon	13.83	6.04	7.90	19.53	2.52	3.99
Mobil	—	16.31	16.31	—	10.70	10.70
Getty	—	2.81	2.81	—	5.42	5.42
ARCO	4.43	17.50	11.46	7.67	6.64	6.65

EXHIBIT 15

RESPONDENTS REPLY MEMO OF JULY 14, 1980

UNITED STATES
DEPARTMENT OF THE INTERIOR
Washington

Memorandum

Oct. 31, 1977

To: Secretary

From: Deputy Under Secretary B.H.

Subject: Requests for delay of OCS Sales 42 and 43

You have received a letter from 59 congressmen, including Udall, Yates, Phil Burton, John Murphy, and others, asking that, in light of the Rules Committee action on H.R. 1614, you postpone the Jauary Georges Bank sale, and possibly the next sale as well (South Atlantic). This is likely to be only the first of a series of such requests.

I have tried to put together some background on new provisions in the bill, end all the arguments for and against, and ramifications of a decision either to delay or not to delay.

Major provisions in H.R. 1614 that cannot be accomplished under existing law

1. *Bidding systems.* Existing law restricts the sale of leases to bonus or royalty bidding. H.R. 1614 enumerates a number of other possible bidding systems,and authorizes the Secretary to use any of them, or any modifications of them, or any other bidding systems. The Solicitor's office has said we could get away with a form of net profit sharing under existing law, but everyone seems to agree that we would be challenged in court if we were to try it.

2. *Lease cancellation.* Existing law allows cancellation only for gross negligence or willful violation of lease

terms. H.R. 1614 would allow cancellation in extraordinary circumstances for environmental or safety reasons, with appropriate compensation to the lessee. This provision would be retroactive to existing leases *if* it is not changed before final passage.

3. *Pre-lease exploration.* H.R. 1614 clarifies the authority of the Secretary to conduct, contract for, or permit pre-lease exploration.

4. *Fishermen's gear compensation.* H.R. 1614 would establish a fund to compensate fishermen for damage to gear due to OCS operations. The Solicitor's office has said we cannot accomplish this through lease stipulations.

Above are things which *cannot* be clearly accomplished under existing law. There are other provisions which can, but which in 25 years, have not been implemented. We are moving on some of them, but there is still the fear among many interests, including states, that while *you* are listening to their concerns, you will not be Secretary forever. They want those provisions legislatively mandated. (The bill also streamlines the judicial review process, without restricting anyone's access to judicial relief.)

There is no question and no dispute about who was responsible for the Rules Committee's action—the major oil producers. It is a rather timely follow-up to the President's comments on their role in the Senate on the energy legislation. In my view, despite all the rhetoric about "nationalized oil" and "delays," what the big companies really dislike in H.R. 1614 is new bidding systems. If they can delay enactment of the bill past March, after the Georges Bank and South Atlantic sales, they will have bought the first three prime frontier offerings on the east coast (including Baltimore Canyon) under primarily bonus bidding. You may recall that in the Baltimore Canyon Sale, Exxon, bidding alone, won fully *one-third* of the leases sold.

Unfortunately, unless we were to delay those sales until summer, we would probably not be able to implement a complete profit sharing system, due to delays PBA has encountered.

OPTIONS

1. *Delay*

a. *indefinitely*, pending Rules Committee and/or House action

PRO:

—delay could allow us to utilize non-bonus bidding in the next two major frontier sales.

—delay could allow us to utilize non-bonus bidding in the next two major frontier sales

—a 3-5 month delay is relatively insignificant, given that it will take about 5-8 years to achieve production.

—these sales could easily be rescheduled, since there is now a six month hiatus between Sale 45 (April 1978) and Sale 65 (October 1978), and it would not decrease the number of sales in 1978, or be an administrative burden.

—the President's energy message included a strongly stated endorsement of the OCS bill as part of his energy program. A delay and appropriate and understandable statement about the reasons, would emphasize its importance.

—not having the bill in place continues the present uncertainty about the "ground rules" for both states and industry, and may influence some to seek ways for delaying the sales through litigation (which, if successful, could delay us more than 3-5 months).

—the withholding of lease sales is one of the very few economic levers the Administration alone (as

opposed to the Administration and Congress) holds over the oil industry. It would, therefore, be a way of telling the major companies that the Administration can play "hard ball," too, and would reinforce the President's comments about the companies.

CON:

—the companies will certainly accuse the Administration of delaying development.

—you have stressed the need for keeping, as much as possible, to the announced schedule.

—we might not be able to implement the new bidding systems until next summer.

b. *delay for three months giving Congress time to act*

PRO:

—it is not an indefinite delay

CON:

—it gives opponents a target date, and announces that if they can just lobby Congress until March, Interior will hold the sales

2. *Announce that you are considering postponing the sales*

PRO:

—puts industry on notice that you *may* postpone the sales until the Rules Committee sends the bill to the floor. (Note: for all of the options, it is important to stress Rules Committee action. To be defeated after vigorous airing of the issues is one thing, but to bottle the bill up in Rules and not allow the House to debate it is unconscionable).

CON:

—Once you have announced that you are *considering* such an action, pressure from industry, full page ads, etc., will be phenomenal.

3. *No delay*

PRO:

—your previously stated commitments to try to stick to a schedule would be upheld

—no one could accuse the Administration of "delaying" development

CON:

—some people will accuse the Administration of "giving away" valuable resources and contributing to anti-trust problems by utilizing bonus bidding when we know that alternative systems are in pending legislation.

4. *Announce that the next two sales will be on the basis of royalty bidding* (similar to Cook Inlet, only 100% instead of 33%)

—This addresses the bonus bidding problems (anti-trust and fair return), but we need a good analysis of the Cook Inlet results before making a decision.

—royalty bidding has several problems, including a disincentive to produce as pressure in a well decreases and the price of producing increases. It may be possible to resolve some of these problems (for example, by defining some sort of decline curve as the basis of a sliding royalty), although I doubt that it could be done by January.

Regardless of your decision on the delay question, I suggest that you recommend that the President call Representative Delaney, Chairman of the Rules Committee, and try to get a firm commitment that H.R. 1614 will be the *first* item at Rules' *first* meeting when Congress returns in January.

You should be aware that support for H.R. 1614 comes from a wide variety of interests:

Most coastal states
Consumer organizations (including the Consumer Federation of America, and Energy Action and Congress Watch (Nader))
Environmental groups
Labor (Marine engineers; oil, chemical and atomic workers, others)
Associated Gas Distributors
National Rural Electric Cooperative Association
Others

cc:

Under Secretary
Chuck Parrish
Bob Mendelson
Heather Ross

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

Civil No. 79-1633

ENERGY ACTION EDUCATIONAL FOUNDATION, ET AL., PLAINTIFFS

v.

CECIL D. ANDRUS, ET AL., DEFENDANTS

AFFIDAVIT OF H. THEODORE HEINTZ, JR.

I, H. THEODORE HEINTZ, JR., having been duly sworn, state as follows:

I am an Economist serving as Assistant Director of the Office of Policy Analysis, U.S. Department of the Interior. I have been responsible for policy and economic analysis concerning a variety of OCS policies over the past four years. Along with other staff of the Office of Policy Analysis, I have been directly involved in the analysis of bidding systems and their performance and the development and testing of various bidding systems. I have been asked to respond to the Affidavit of George L. Donkin dated July 14, 1980. Mr. Donkin's July 14, 1980, affidavit references earlier affidavits prepared by him and to which I responded in an affidavit dated June 17, 1979.

HEINTZ AFFIDAVIT

1. Mr. Donkin continues to use calculations of the government's effective share (p. 2) which are not relevant to the determination of fair market value. As I have stated in my previous affidavit, the government's effective share of the eventual value of oil and gas production from OCS leases is not a correct standard for determining receipt of "fair market value for the lands leased and the rights conveyed," which is the statutory standard. Mr. Donkin's index is based

on a concept of economic value that totally ignores the role of costs. It also focuses on the value of oil and gas, as indicated by Mr. Donkin's statement about "fair value for [the government's] hydrocarbons [sic] resources" (p. 2) rather than the "lands leased and rights conveyed" as does the statute. The distinction is important because the lease transfers a mineral right, that is, the right to explore, develop, and produce oil and gas, but it does not in any way assure the lessee will actually find and produce oil and gas resources. The transaction subject to the fair market value requirement is the transfer of a mineral right, not the sale of hydrocarbon resources.

2. Mr. Donkin repeats (p. 3 LL. 12 and 20) his claim that "16⅔ percent of production value is less than the fair value of the oil and gas resources located at OCS leases in the Federal domain." (p. 3 LL 12-14)

   This claim is based on the erroneous assumption that the government's royalty receipts constitute the only value received in exchange for the mineral rights conveyed. In fact, all government leasing revenues, bonuses and rental payments as well as royalties, must be considered.

3. Mr. Donkin focuses much attention on the effects of unexpected increases in the prices of oil and gas. This discussion compounds the error of focusing on the value of oil and gas instead of the mineral right by incorporating a further error: the actual value of the oil and gas eventually produced is confused with the value of the mineral right years earlier when the lease is issued. The fair market value for any property is the price that would be paid for the property when actually sold in a market. This market value is not necessarily equal to the market value of the same property many years hence. For example,

when a real estate property is condemned, its fair market value is based on what is kown about the property and the conditions in the market at the time of its condemnation. The fact that unexpected changes in the market over a 10 or 20 year period result in a much higher or lower value does not mean that the condemnation did not provide the seller fair market value. Mr. Donkin attempts to prove that the government did not receive fair market value for leases issued in the 1950's and 1960's because of the unexpected oil and gas price increases of the 1970's. He offers no evidence with regard to the fair market value of the leases at the time they were sold by the government. The value of the leaseholds twenty years later, affected as it is by world oil prices, is not relevant to the determination of their value at the time they were sold.

4. Mr. Donkin correctly concludes that use of a higher royalty rate would provide the government with a greater share of any windfall profits that result from unexpected price increases that occur after sale of the leases. (p. 3) However, even if capturing such future windfalls were necessary to assure receipt of fair market value at the time of lease issuance, it is clear that to capture all such windfall profits, the royalty rate would need to be 100%. However no lessee would accept a lease on which he would incur exploration and development costs while keeping none of the production revenues. The government must therefore be forced to accept less than 100% of such windfall profits at best. Mr. Donkin offers no standard or approach for determining what percentage of future windfall profits would satisfy his notion of fair market value for a lease. In fact, I know of no logical basis for making a determination of fair market value based only on royalty rates and the resulting share of windfall profits. Mr. Donkin has used a standard for fair market value which is in-

correct and illogical and can have little relevance to the issue of whether the Secretary of the Interior has complied with the statutory requirements.

/s/ H. Theodore Heintz, Jr.
H. THEODORE HEINTZ, JR.
Assistant Director, Office
of Policy Analysis
U.S. Department of the Interior

Subscribed and sworn to before me, this 30th day of July 1980.

/s/ [Illegible]
Notary Public

My commission expires 3/31/83.

SUPREME COURT OF THE UNITED STATES

No. 80-1464

JAMES G. WATT, SECRETARY OF THE INTERIOR, ET AL., PETITIONERS

v.

ENERGY ACTION EDUCATIONAL FOUNDATION, ET AL.

ORDER ALLOWING CERTIORARI

Filed April 6, 1981

The petition herein for a writ of certiorari to the United States Court of Appeals for the District of Columbia Circuit is granted.

☆ U. S. GOVERNMENT PRINTING OFFICE: 1981 349725 504